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OF AUSTRALIA

VOL. I.—16TH YEAR.

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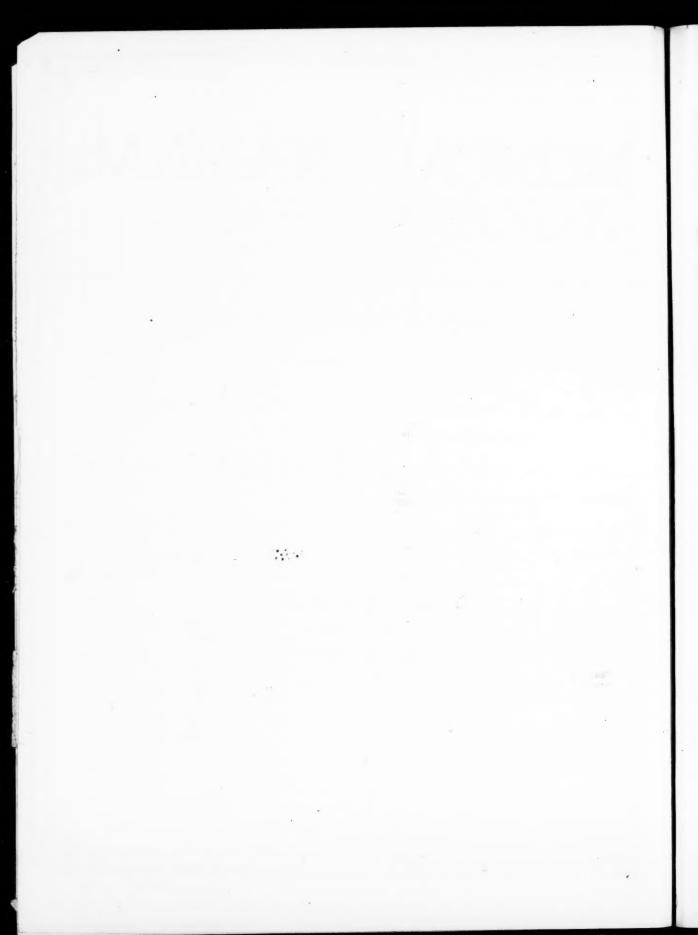
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No. 1.

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THE INTERNATIONAL CLASSIFICATION OF DISEASE AND CAUSES OF DEATH AND ITS REVISION.¹

By Sir George H. Knibbs, C.M.G., Honorary F.S.S., Honorary M.Amer.S.Assoc., Member of the International Institute of Statistics, Honorary Member of the Statistical Societies of Paris and Hungary.

INTRODUCTORY.

Fundamental Conceptions of Classification.

WITH a complex organism such as the human body the ætiology of disease and death is ordinarily by no means a simple matter, though in popular statements it may appear to be so. Many minds are satisfied when a mere name is given as a cause. Excepting death from external violence, probably life's termination is always due to a complex of conditions and the assigning of one of these as the cause is in a measure arbitrary and empirical. For example, the toxins developed by certain conditions may so impair the heart's action that more than ordinary care as to physical effort is indicated as necessary, but undue strain being put upon it, the result is death. The immediate cause of death is the undue strain on a weak heart; the complex cause is the toxin impairment together with the undue strain. Or again, suppose that as a consequence of syphilis arterio-sclerosis of the brain exists and by some action the blood pressure is greatly increased, resulting in death from apoplexy. The primary cause is the syphilis; the final cause is the consequence of the extravasation of blood; the arteriosclerosis is but a link, as it were, in the chain of causes or rather coexistent conditions.

These two examples will perhaps sufficiently illustrate the point that in order to be practically serviceable a classification of diseases and causes of death must necessarily abandon any attempt at rigorous exactitude and rest satisfied with rules of procedure which roughly serve the main purposes of the classification. It is self-evident that a classification for any one purpose will probably have limitations from the point of view of another purpose. It may be noted, therefore, that the existing international classification has been developed by men who were both medical practitioners of high reputation and statisticians of eminence. Moreover, at each revision the experience gained by its use during the intervening period has influenced the changes made. A study of these will convince any methodologist that the improvements have been very great.

What Governs a Classification?

As pointed out in the 1869 classification of the Royal College of Physicians, London, a classification might be arranged according to symptoms, to (supposed) causes, to the intimate nature of the disease, to the tissues or parts of the body affected, to their anatomical location and so on; in short classifications will vary according to their fundamental purpose. In a valuable article in *The Lancet* in 1901, Dr. Charles Powell White also indicated that classification may be related to the causes of the

disease, to their aspect from the standpoint of pathology; it may be founded upon the macroscopic indications of morbid anatomy or upon their histological characters or again may have regard to clinical requirements.

Obviously any classification is influenced by

Obviously any classification is influenced by accessions of knowledge, by new aspects of the subject matter arising therefrom and by the elimination of perceived defects. And it may be added that even changes in terminology will necessitate revision. One may say then that the development of a classification is or should be collateral with the development of the scientific knowledge affecting it.

Impermanency of any Classification.

From what has just been said it is obvious that, however perfect a classification may be at the time of its creation, it is inevitable that it will need to be amended from time to time. Scientific and medical knowledge is for ever advancing. Whether it aims at being a scientific nosology, if that be a possibility, or at being of service for statistical ends, a classification must be in sensible agreement with the existing state of knowledge. It will, however, always be a little out of date. In this connexion it has to be remembered that in all revisions it is important that as far as possible the continuity of record should be substantially preserved. As the present intention is to undertake decennial revisions, this matter is worthy of quite special attention. It is, of course, recognized that meticulous consistency between classifications of widely different dates cannot be secured. Nor can it assuredly be assumed that the incidence of disease itself in no way varies with time. The present occasion, however, is inappropriate for a fuller reference to this aspect of the matter under consideration. I pass therefore to the history of classification.

HISTORY.

Early History.

When Hermann Boerhaave (1668-1738), of Leyden, endeavoured to create a system of medical philosophy by fusing together the vis medicatrix naturæ conception of the priest-physician Hippocrates (460-545?), the chemico-humoral principle of Paracelsus (1490-1541) and the mechanical doctrines of Lorenzo Bellini (1643-1703), he probably laid the foundation of the conceptions which have brought about the attempt to classify diseases systematically. As far as I am aware this systematic attempt was first undertaken by François Bossier de Lacroix (1706-1777), otherwise known as Sauvages, who was a contemporary of Linnæus (1707-1778). Sauvages's comprehensive work was published under the title "Nosologia Methodica." Linnæus who practised as a physician, was strongly antagonistic to the views of Boerhaave and he drew up a treatise under the title "Genera Morborum." Linnæus's genius as a methodologist has doubtless had considerable influence upon the development of a satisfactory classification.

Another contemporary of Sauvages and Linnæus, namely, William Cullen (1710-1790), of Edinburgh,

¹Read at a meeting of the Victorian Branch of the British Medical Association on November 14, 1928.

published in 1785 his "Synopsis Nosologiae Methodica," a classification remarkable for its clarity and simplicity. Its categories were four: (i) Pyrexiae, (ii) neuroses, (iii) cacheviae and (iv) locales. This work has greatly influenced all subsequent nosologies and it may be observed that in the early part of last century nosology was ardently studied and was believed to be necessary for the practical treatment of diseases. (1)

Dr. William Farr (1807-1883), the eminent English statist, found the nosology of Cullin, in use in the public services of his day, had not been revised so as to embody the advances of medical science nor was it deemed by him to be appropriate for statistical purposes. He therefore prepared a statistical nosology. Emphasizing the importance of the adoption of a uniform statistical nomenclature, even if imperfect, he urged its adoption without delay. (2) At the first Statistical Congress in Brussels, which was held in 1853, Dr. William Farr and Dr. Marc d'Espine, of Geneva, were appointed to prepare a report upon a classification which might be used in all countries. This was on the motion of Dr. Achille Guillard, an eminent botanist and statistician and grandfather on his mother's side of Dr. Jacques Bertillon, who has done so much for statistical nosology. Their classification was the progenitor of the present "International List"; it was adopted in Paris in 1855, in Vienna in 1857 and was translated into six languages.(3)

Revision of the Adopted List.

The list, adopted in Paris in 1855, was revised "sur le modèle de celle de W. Farr" at Paris in 1864. Before this, however, that is on July 9, 1857, the Royal College of Physicians, London, resolved to appoint a committee to inquire into the whole matter. The passing of the Medical Act of 1858 caused delay and it was not till 1859 that a committee was actually appointed for the purpose of preparing the classification recognized as desirable. In 1863 the task was resumed and very thoroughly discharged, nomenclatures in Latin, French, German and Italian being also taken into account. An edition, intended to be revised every ten years, was published in 1869. There have been revisions in 1885, 1896, 1906 and 1918.

To return to the Paris classification of 1864. This was revised in 1874, 1880 and 1886. Here it may be proper to mention that an American nomenclature was prepared a little more than a half of a century ago. It should also be mentioned that at the Congress of the International Institute of Statistics held in Chicago in 1893 the draft classification, presented by Dr. Jaques Bertillon for international use, was adopted by a number of countries and, at a meeting of the American Public Health Association in Ottawa in 1898, was recommended for use in the United States.

Revisions of the International Nomenclature in 1909 and Later.

The "International Classification" was revised again in 1909 and 1920. In connexion with the

former revision it may be mentioned that Australia! was represented. This came about in the following way. The first Commonwealth Statistician, Australia, about a year after his appointment, recognizing the desirability of falling into line with the rest of the world interested in the matter, had spoken to several persons as to the need of adopting the Bertillon classsfication. He was invited to give an address to the Victorian Branch of the British Medical Association and did so on June 12, 1907, the title of the address being "The Classification of Disease and Causes of Death from the Standpoint of the Statistician." The then President, the late Sir Harry Allen, was in the chair. The address appeared in The Intercolonial Medical Journal of Australasia of June 20, 1907, and was issued in the form of a reprint of twenty-four pages with the subsequent discussion. Later a committee of four was appointed, of which I was one, and this committee saw, among other things, that it was necessary to make good some omissions of diseases which occurred in this country, but were ignored in the existing classification. As the Statistician was going to Europe as the delegate of the Federal Government on several matters and was moreover its delegate on the Revision Committee of the International Nomenclature for a meeting to be held on July 1 to 3, 1909, it was suggested that he should bring the results of the committee's work before the Revision Committee. These had the strong support of the late Dr. Louis Guillaume, the eminent Statistician of Switzerland, and practically the whole of the points submitted were accepted. The articles of agreement were signed by the delegates of the twenty governments represented who undertook to recommend to their governments the adoption of the nomenclatures, "in order to insure uniformity and comparability of statistics and causes of death, beginning on January 1, 1910." This list contained the names of the representatives of Australia (myself), of Austria and Vienna, Belgium, Brazil, Bulgaria, China, Colombia, Costa Rica, Spain, United States (six), France (three), Greece, Italy (three), Mexico, Monaco, Montenegro, the Netherlands (three), Roumania, Russia (two) and Switzerland.

As stated in the nomenclature issued by the Federal Government in 1910, it was thought desirable by the representatives of the United States and the representative of the Australian Commonwealth that the two countries should use the same authoritative classification agreed upon in Paris and this was given effect.

The third decennial revision by the International Committee took place in Paris from October 11 to 15, 1920, and to this the representatives of no less than forty-three countries subscribed. These were: Belgium, Bulgaria, Chile, China, Colombia, Cuba, Czechoslovakia, Denmark, Dominican Republic, Ecuador, England and Wales, France, Germany, Greece, Guatemala, Haiti, Holland, Honduras, Hungary, Ireland, Italy, Japan, Luxemburg, Mexico, Monaco, Morocco, Nicaragua, Panama, Paraguay, Persia, Peru, Portugal, Salvador, Scot-

land, Siam, Spain, Sweden, Switzerland, Tunis, United States, Uruguay, Venezuela and Jugoslavia.

Populations Brought Under the International System.

At the fourteenth International Congress of Hygiene and Demography, held at Berlin in 1907, it was stated by Dr. Jacques Bertillon that he estimated that the international nomenclature was then in effect for about two hundred and twelve millions of population, the registration areas for the United States however being at that time only about The populations of the thirty-three millions. countries which approved the 1920 nomenclature, omitting China's 467,000,000, now total about 580,000,000, that is between one-third and one-fourth of the world's total. Uniformity of procedure for so large a proportion of the world's peoples when fully achieved will be a splendid achievement, but it is to be remembered that in some countries (for example. United States) the whole of the population is not really included; the registration system is not national and does not embrace the whole of the people. Moreover, I understand that, although the delegates of many countries have agreed to recommend their governments to adopt the international nomenclature, their recommendations have not always been put into force. It will take some time to create the machinery requisite to achieve what is desired.

THE 1920 CLASSIFICATION. Main Features of the Last Classification.

Although the last revision took place in October, 1920, the letter transmitting the United States of America edition bears the date June 30, 1923, and it issued from the Government Printing Office in Washington only in 1924. It is excellently got up, the text occupying 142 pages and the index 160 pages, 302 in all. As the English edition has not yet appeared, the comparisons later given are based upon this and the 1909 nomenclature, published by the Commonwealth Statistician of Australia on July 1, 1910, and by the Director of the United States Census on October 16, 1911 (that is, more than fifteen months later). The headings are in nearly all cases the same, but the list of names of diseases included is much more extensive in the American edition.

A detailed international list of causes of death and an abridged international list (1920) are given in parallel columns on pages 18 to 27, the United States "Standard Certificate of Death" on page 29, suggestions to physicians and registrars in regard

to reporting causes of death on pages 30 and 31 and the 205 items of the list are given on pages 31 to 35. On pages 36 to 40 a comprehensive list of "undesirable terms" is given and it is stated that thousands of queries are annually sent out asking for more specific statements regarding causes of death, the replies being considered confidential and used for statistical purposes only. The more extended list, showing the terms included under each title, follows on pages 45 to 142. The very extensive index enables every disease to be readily referred to its proper place in the classification.

The list of diseases is embraced under XV instead of under XIV categories as in 1909, (I) being subdivided and rearranged as follows: I-Epidemic. Endemic and Infectious Diseases, II-General Diseases not included in Class I, instead of I as in the 1909 list. The other headings are the same, the number being one greater in the 1920 list than in the 1909 one. The headings are numbered hereunder as in the 1920 list and the only differences are that "XII-Early Infancy" was formerly "XI-Diseases of Early Infancy" and "XIV-External Causes" was "XIII-Affections Produced by External Causes." The 1920 list contains the headings: "III-Diseases of the Nervous System and of the Organs of Special Sense," "IV-Diseases of the Circulatory System," "V-Diseases of the Respiratory System," "VI-Diseases of the Digestive System," "VII-Non-Venereal Diseases of the Genito-Urinary System and Annexa," "VIII-The Puerperal State," "IX-Diseases of the Skin and of the Cellular Tissue," "X-Diseases of the Bones and of the Organs of Locomotion," "XI-Malformations," "XII —Early Infancy," "XIII—Old Age," "XIV—External Causes," "XV—Ill-Defined Diseases." As previously stated, if a unit be taken off the Roman figure from III to XV, the number then applies to the 1909 classification.

We see then that practically no change at all has been made in the categories under which causes of death have been grouped. In the next section, however, it will be obvious that changes have been made in the grouping of the diseases under these headings.

Detailed Lists of the Causes of Death, 1920 and 1909.

In order to show clearly the progress made in the 1920 classification system, the differences are shown in parallel columns, the 1920 system being on the left hand and the 1909 on the right. For the latter I shall adopt the title as it appears in the Commonwealth publication of 1910.

1920.

- 1. Typhoid and paratyphoid fever: (a) typhoid; (b) paratyphoid.Typhus fever.Relapsing fever (Spirillum obermeieri).

 - 4. Malta fever.
 - 5. Malaria.
 - 6. Small pox.
 - 7. Measles; 8. Scarlet fever; and 9. Whooping-cough.
 - 10. Diphtheria.
 - 11. Influenza. 12. Miliary fever.

1909.

- 1. Typhoid fever (abdominal typhus).
 - 2. Typhus fever (exanthematic typhus).
 - 3. Relapsing fever (recurrent fever).
 - Included in relapsing fever.

 Malaria (malarial fever and cachexia). 4A. Including malarial fever and cachexia.
 - Small pox (variola).
 - Measles; 7. Scarlet fever; and 8. Whooping-cough.
 - 9. Diphtheria and croup; 9a. Including croup.
 - 10. Influenza (grippe). Miliary fever.

I.

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1920 (continued).

13. Mumps.
14. Asiatic cholera; 15. Cholera nostras.
16. Dysentery: (a) ameebic; (b) bacillary; (c) unspecified or due to other causes.
17. Plague: (a) bubonic; (b) pneumonic; (c) september 15.

ticæmic; (d) unspecified.

Yellow fever.

Spirochætal hæmorrhagic jaundice. 19.

20. Leprosy. 21. Erysipelas.

22. Acute anterior poliomyelitis.

Lethargic encephalitis; and 24. Meningococcus 23. meningitis.

25. Other epidemic and endemic diseases: (a) chicken pox; (b) German measles; (c) others under this title.

Glanders.

27. Anthrax.

Rabies; 29. Tetanus; 30. Mycoses.

Tuberculosis of the respiratory system.

Tuberculosis of the meninges and central nervous system.

Tuberculosis of the intestines and peritoneum. Tuberculosis of the vertebral column.

Tuberculosis of the joints.

Tuberculosis of other organs: (a) tuberculosis of the skin and subcutaneous cellular tissue; (b) tuberculosis of the bones, vertebral column excepted; (c) tuberculosis of the lymphatic system, mesenteric and retroperitoneal glands excepted; (d) tuberculosis of the genito-urinary system; (e) tuber-culosis of other organs than the above.

37. Disseminated tuberculosis.

38. Syphilis.

Soft chancre.

40. Gonococcus infection.

Purulent infection, septicæmia.

Other infectious diseases.

I.

1909 (continued).

In 19, other epidemic diseases,

Asiatic cholera; 13. Cholera nostras.

14. Dysentery.

15. Plague.

16. Yellow fever.

Omitted from list.

17. Leprosy. 18. Erysipelas

Omitted from list.

See 55. Other general diseases; 24 appears in 1909 list as 61A.

Other epidemic diseases; these are not identical with 25 of 1920.

21. Glanders (glanders and farcy).

22. Anthrax (malignant pustule and charbon).
23. Rabies; 24. Tetanus; 25. Mycoses.
28. Tuberculosis of the lungs, which see, for measure of identity.

30. Tuberculous meningitis (tuberculosis of the meninges), compare.

31. Abdominal tuberculosis, compare.
32. Pott's disease, compare; Paraplegia is entered under 32, but not under 34 of 1920.

33. White swellings, compare.34. Tuberculosis of other organs.

35. Disseminated tuberculosis.

37. Syphilis, for morbidity statistics only, primary, secondary, tertiary, hereditary, and "period not stated" are distinguished.

38A. Soft chancre.

38. Gonococcus infection; and 38B. 20. Purulent infection and septicæmia.

No corresponding section.

43. Cancer and other malignant tumours of the buccal cavity.

44. Cancer and other malignantt umours of the stomach, liver.

45. Cancer and other malignant tumours of the peritoneum, intestines, rectum. 46. Cancer and other malignant tumours of the female

genital organs. 47. Cancer and other malignant tumours of the breast. Cancer and other malignant tumours of the skin.

Cancer and other malignant tumours of other or

unspecified organs. 50. Benign tumours and tumours not returned as malignant (tumours of the female genital organs

excepted). Acute rheumatic fever.

Chronic rheumatism, osteo-arthritis, gout. 52.

53. Scurvy.

54. Pellagra. Beriberi. 55.

Rickets. 56.

Diabetes mellitus.

Anæmia, chlorosis: (a) pernicious anæmia; (b) other anæmias and chlorosis.

anemias and chlorosis.

59. Diseases of the pituitary gland.

60. Diseases of the thyreoid gland: (a) exophthalmic goître; (b) other diseases of the thyreoid gland.

61. Diseases of the parathyreoid gland.

62. Diseases of the adrenals (Addison's disease).

63. Diseases of the splean.

64. Diseases of the spleen.
65. Leuchæmia and Hodgkin's disease: (a) leuchæmia; (b) Hodgkin's disease.

1909.

I. 39. Cancer and other malignant tumours of the buccal cavity.

40. Cancer and other malignant tumours of the stomach, liver.

41. Cancer and other malignant tumours of the peritoneum, intestines, rectum.

42. Cancer and other malignant tumours of the female genital organs.

Cancer and other malignant tumours of the breast. Cancer and other malignant tumours of the skin. Cancer and other malignant tumours of other or

unspecified organs. 46. Other tumours (tumours of the female genital organs

Acute articular rheumatism.

48. Chronic rheumatism and gout.

49. Scurvy.

26. Pellagra. 27. Beriberi.

36. Rickets (rachitis).

Diabetes.

54. Anæmia, chlorosis.

excepted).

Included under 55 of 1909 list.

88. Diseases of the thyreoid body.

Included under 88 of 1909 list (American edition). Included under 84 of 1909 list (American edition).

52. Addison's disease (bronze disease of Addison).

116. Diseases of the spleen.

53. Leuchæmia.

П.

1920 (continued).

- Alcoholism (acute or chronic).
- 67. Chronic poisoning by mineral substances: (a) chronic lead poisoning; (b) others under this title. Chronic poisoning by organic substances.
- 69. Other general diseases.

I.

.1909 (continued).

- Alcoholism (acute or chronic). 57. Chronic lead poisoning (saturnism); also 58. Other chronic occupation poisonings.
- 59. Other chronic poisonings.69. Other general diseases.

1920.

- 70. Encephalitis. III.
 - 71. Meningitis: (a) simple meningitis; (b) non-epidemic cerebro-spinal meningitis.
 - 72. Tabes dorsalis (locomotor ataxia).73. Other diseases of the spinal chord.
 - 74. Cerebral hæmorrhage, apoplexy: (a) cerebral hæmorrhage; (b) cerebral embolism and thrombosis.
 75. Paralysis without specified cause: (a) hemiplegia; (b) others under this title.

 - General paralysis of the insane.
 - 77. Other forms of mental alienation.

 - Epilepsy.
 Convulsions (non-puerperal; five years and over).
 - 80. Infantile convulsions (under five years of age).
 - Chorea
 - 82. Neuralgia and neuritis.

 - 83. Softening of the brain.84. Other diseases of the nervous system.
 - 85. Diseases of the eye and annexa.
 - 86. Diseases of the ear and of the mastoid process: (a) diseases of the ear; (b) diseases of the mastoid process.

- II. 60. Encephalitis.
 - 61. Simple meningitis; and 61A. Epidemic cerebro-spinal meningitis (this goes under 24 in the 1920 list).
 62. Locomotor ataxia (progressive locomotor ataxia).
 63. Other diseases of the spinal chord.

 - 64. Cerebral hæmorrhage, apoplexy.

 - 66. Paralysis without specified cause.
 - General paralysis of the insane.
 - Other forms of mental alienation.
 - Epilepsy.
 - 70. Convulsions (non-puerperal), eclampsia (nonpuerperal).
 71. Convulsions of infants.

 - Chorea.
 - 73. Neuralgia and 73A. neuritis : Hysteria 73B. Neuralgia and neuritis.
 - 65. Softening of the brain.
 - Other diseases of the nervous system.
 - Diseases of the eyes and their annexa; 75A. Follicular conjunctivitis; 75B. Trachoma.
 - Diseases of the ears.

1920.

- IV. 87. Pericarditis.
 - 88. Endocarditis and myocarditis (acute).

 - 89. Angina pectoris. 90. Other diseases of the heart.
 - Diseases of the arteries: (a) aneurysm; (b) arteriosclerosis; (c) other diseases of the arteries.
 - Embolism and thrombosis (not cerebral).
 - Diseases of the veins (varices, hæmorrhoids, phlebitis, et cetera).

 Diseases of the lymphatic system (lymphangitis,
 - et cetera).
 - 95. Hæmorrhage without specified cause.
 - 96. Other diseases of the circulatory system.

1909.

- III. 77. Pericarditis.
 - 78. Acute endocarditis. 80.
 - Angina pectoris.
 - Organic diseases of the heart.
 - 81. Diseases of the arteries, atheroma, aneurysm, et cetera.
 - 82. Embolism and thrombosis.
 - Diseases of the veins (varices, hæmorrhoids, phlebitis, et cetera).
 - Diseases of the lymphatic system (lymphangitis, et cetera).
 - 85. Hæmorrhage; other diseases of the circulatory Included in 85 of the 1909 list.

- 97. Diseases of the nasal fossæ and their annexa:

 (a) diseases of the nasal fossæ;
 (b) others under this title.
 - 98. Diseases of the larynx.
 - 99. Bronchitis: (a) acute; (b) chronic; (c) unspecified, under five years of age; (d) unspecified, five years and over.
 - 100. Bronchopneumonia : (a) bronchopneumonia ; (b) capillary bronchitis.
 - 101. Pneumonia: (a) lobar; (b) unspecified.
 - 102. Pleurisy.
 - Congestion and hæmorrhagic infarct of the lung. 103.
 - 104. Gangrene of the lung.
 - 105. Asthma.
 - Pulmonary emphysema.
 - 107. Other diseases of the respiratory system (tuberculosis excepted): (a) chronic interstitial pneumonia, including occupational diseases of the respiratory system; (b) diseases of the mediastinum; (c) others under this title.

- IV. 86. Diseases of the nasal fossæ.
 - 87. Diseases of the larynx.
 - 89. Acute bronchitis; and 90. Chronic bronchitis.
 - 91. Bronchopneumonia.
 - 92 Pneumonia.
 - 93. Pleurisy.
 - Pulmonary congestion, pulmonary apoplexy, 94.
 - 95. Gangrene of the lungs.
 - 96. Asthma.
 - 97. Pulmonary emphysema.
 - Other diseases of the respiratory system (tuberculosis excepted).

1920.

- VI. 108. Diseases of the mouth and annexa.
 - Diseases of the pharynx and tonsils (including adenoid vegetations): (a) adenoid vegetations; (b) others under this title.

1909.

- 99. Diseases of the mouth and annexa; 99A. Disease of the teeth and gums; 99s. Other diseases of the mouth and annexa.
 - 100. Diseases of the pharynx: angina and other affections of the pharynx.

VI.

1920 (continued).

- 110. Diseases of the esophagus.
 111. Ulcer of the stomach and duodenum: (a) ulcer of the stomach; (b) ulcer of the duodenum.
- 112. Other diseases of the stomach (cancer excepted).
 113. Diarrhœa and enteritis (under two years of age).
 114. Diarrhœa and enteritis (2 years and over).

- 114. Diarrhœa and enteritis (2 years and over).
 115. Ancylostomiasis.
 116. Diseases due to other intestinal parasites:

 (a) cestodes, hydatids of the liver excepted;
 (b) trematodes;
 (c) nematodes, other than ankylostoma;
 (d) coccidia;
 (e) other parasites specified;
 117. Appendicitis and typhlitis.
 118. Hernia, intestinal obstruction:
 (a) hernia;
 (b) intestinal obstruction.

 119. Other diseases of the intestines.

- (b) Intestinal obstruction.

 119. Other diseases of the intestines.

 120. Acute yellow atrophy of the liver.

 121. Hydatid tumour of the liver.

 122. Cirrhosis of the liver: (a) specified as alcoholic;

 (b) not specified as alcoholic.
- 123. Biliary calculi. 124. Other diseases of the liver. 125. Diseases of the pancreas.
- 126. Peritonitis without specified cause.
- 127. Other diseases of the digestive system (cancer and tuberculosis excepted).

1909 (continued).

- 101. Diseases of the cesophagus.
- 102. Ulcer of the stomach.
- 103. Other diseases of the stomach (cancer excepted).
- 104. Diarrhœa and enteritis (under two years). 105. Diarrhœa and enteritis (two years and over).
- 106. Ancylostomiasis.
- 107. Intestinal parasites.
- 108. Appendicitis and typhlitis.
- 109. Hernia, intestinal obstruction.
- 110. Other diseases of the intestines.
- 111. Acute yellow atrophy of the liver (icterus gravis). 112. Hydatid tumour of the liver.
- 113. Cirrhosis of the liver.
- 114. Biliary calculi.
- 115. Other diseases of the liver.
- Other diseases of the digestive system (cancer and tuberculosis excepted).
 Other diseases of the digestive system (cancer and
- tuberculosis excepted).

 118. Other diseases of the digestive system (cancer and
- tuberculosis excepted).

1920.

- VII. 128. Acute nephritis (including unspecified under ten years
 - 129. Chronic nephritis (including ten years and over).
 - 130. Chyluria.
 - 131. Other diseases of the kidneys and annexa.

 - 132. Calculi of the urinary passages.
 133. Diseases of the bladder.
 134. Diseases of the urethra, urinary abscess, et cetera:
 (a) stricture of the urethra; (b) others under this title.

 - 135. Diseases of the prostrate.
 136. Non-venereal diseases of the male genital organs.
 137. Cysts and other benign tumours of the overy.
 - Salpingitis and pelvic abscess (female).
 - 139: Benign tumours of the uterus.
 - 140. Non-puerperal uterine hæmorrhage.
 - 141. Other diseases of the female genital organs.
 - 142. Non-puerperal diseases of the breast (cancer excepted).

1909.

- VI. 119. Acute nephritis.
 - 120. Bright's disease.

 - 121. Chyluria. 122. Other diseases of the kidneys and annexa.
 - 123. Calculi of the urinary passages. Diseases of the bladder.

 - 125. Diseases of the urethra, urinary abscess, et cetera.

 - 126. Diseases of the prostrate.
 127. Non-veneral diseases of the male genital organs.
 131. Cysts and other tumours of the ovary.
 132. Salpingitis and other diseases of the female genital organs.
 - 129.

 - Uterine hæmorrhage (non-puerperal).

 Other diseases of the uterus; 130a. Metritis; 130a. Other diseases of the uterus.

 Non-puerperal diseases of the breast (cancer excepted).

1920.

- VIII.143. Accidents of pregnancy: (a) abortion; (b) ectopic gestation; (c) others under this title.
 - 144. Puerperal hæmorrhage.
 - 145. Other accidents of labour: (a) Cæsarean section; (b) other surgical operations and instrumental delivery; (c) others under this title.

 146. Puerperal septicæmia.

 147. Puerperal phlegmasia alba dolens, embolus, sudden

 - death.
 - 148. Puerperal albuminuria and convulsions.
 - Following child-birth (not otherwise defined).
 Puerperal diseases of the breast.

- VII. 134. Accidents of pregnancy.
 - 135. Puerperal hæmorrhage.
 - 136. Other accidents of labour.

 - Puerperal septicæmia.
 Puerperal phlegmasia alba dolens, embolus, sudden. death.
 - 138. Puerperal albuminuria and convulsions (eclampsia).
 - 140. Following child-birth (not otherwise defined).141. Puerperal diseases of the breast.

1920.

- IX. 151. Gangrene. 152. Furuncle.

 - 153. Acute abscess.154. Other diseases of the skin and annexa.

1909.

- VIII. 142. Gangrene.
 - 143. Furuncle.

 - Acute abscess (phlegmon, acute abscess).

 Other diseases of the skin and annexa:

 145a. Trichophytosis (tineas and peladas);

 145b. Scabies; 145c. Other diseases of the skin 145. and annexa.

| | | | l de la contraction de la cont |
|-------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| * | | 1920. | 1909. |
| X. | | Diseases of the bones (tuberculosis excepted). Diseases of the joints (tuberculosis and rheumatism excepted). | 1X. 146. Diseases of the bones (tuberculosis excepted). 147. Diseases of the joints (tuberculosis and rheumatiss excepted). |
| | | Amputations. Other diseases of the organs of locomotion. | 148. Amputations. 149. Other diseases of the organs of locomotion. |
| | | 1920. | 1909. |
| XI. | 159. | Congenital malformations (still-births not included): (a) congenital hydrocephalus; (b) congenital malformations of the heart; (c) others under this title. | X. 150. Congenital malformations (still-births not included |
| | | 1920. | 1909. |
| XII. | 160. | Congenital debility, icterus, and scierema. | XI. 151. Congenital debility, icterus, and sclerema 151a. Nurslings discharged from hospitals withou disease. |
| | 161. | Premature birth; injury at birth: (a) premature birth, not still-born; (b) injury at birth, not still-born. | 151B. Congenital debility, icterus, and sclerema. |
| | | Other diseases peculiar to early infancy. Lack of care. | 152. Other diseases peculiar to early infancy.153. Lack of care. |
| | | 1920. | 1909. |
| XIII. | 164. | Senility. | XII. 154. Senility. |
| | | 1920. | 1909. |
| XIV. | 165. | Suicide by solid or liquid poisons (corrosive substances excepted). | XIII. 155. Suicide by poison. |
| | | Suicide by corrosive substances. | Included in 155 of 1909 list. |
| | | Suicide by poisonous gas. Suicide by hanging or strangulation. | Suicide by asphyxia. Suicide by hanging or strangulation. |
| | | Suicide by drowning. | 158. Suicide by drowning. |
| | 170. | Suicide by firearms. | 159. Suicide by firearms. |
| | 171. | Suicide by cutting or piercing instruments. | 160. Suicide by cutting or piercing instruments. |
| | | Suicide by jumping from high places. Suicide by crushing. | Suicide by jumping from high places. Suicide by crushing. |
| | | Other suicides. | 163. Other suicides. |
| | | Poisoning by food. Poisoning by venomous animals. | 164. Poisoning by food.165. Other acute poisonings; and 165A. Venomous bites |
| | 177 | Other south assidental majornings (gas excepted) | and stings. 165s. Other acute poisonings. |
| | | Other acute accidental poisonings (gas excepted). Conflagration. | 166. Conflagration. |
| | 179. | Accidental burns (conflagration excepted). | 167. Burns (conflagration excepted). |
| | 180. | Accidental mechanical suffocation. | Absorption of deleterious gases (conflagration excepted). |
| | 181. | Accidental absorption of irrespirable, irritating, or poisonous gas. | Absorption of deleterious gases (conflagration and suicide excepted). |
| | | Accidental drowning. | 169. Accidental drowning. |
| | | Accidental traumatism by firearms (wounds of war excepted). Accidental traumatism by cutting or piercing | 170. Traumatism by firearms.171. Traumatism by cutting or piercing instruments. |
| | | instruments. | |
| | | Accidental traumatism by fall. | 172. Traumatism by fall. |
| 1 | 187. | Accidental traumatism in mines and quarries. Accidental traumatism by machines. | 173. Traumatism in mines and quarries. 174. Traumatism by machines. |
| | 188. | Accidental traumatism by other crushing (vehicles, railways, landslides, et cetera): (a) railroad accidents; (b) street-car accidents; (c) automobile accidents; (d) aeroplane and balloon | 175. Traumatism by other crushing (vehicles, railways, landslides, et cetera). |
| | | accidents; (e) motor-cycle accidents; (f) injuries by other vehicles; (g) landslide, other crushing. | |
| - 1 | 189. | Injuries by animals (not poisoning). | 176. Injuries by animals. |
| - 1 | 190. | Wounds of war. | No corresponding class. |
| - | 192. | Execution of civilians by belligerent armies. Starvation (deprivation of food and water). | No corresponding class. 177. Starvation; and 177a. Over-exertion. |
|] | 193. | Excessive cold. | 178. Excessive cold. |
|] | 194. | Excessive heat. | 179. Effects of heat (thermonosus). |
| | | Lightning. Other accidental electric shocks. | Lightning. Electricity (lightning excepted); (other electric disturbances). |
|] | 197. | Homicide by firearms. | 182. Homicide by firearms. |
|] | 198. 199. | Homicide by cutting or piercing instruments. Homicide by other means. Infanticide (murder of infants less than one year of | 183. Homicide by cutting or piercing instruments. 184. Homicide by other means. Included in 184 of 1909 list. |

XIV.

1920 (continued).

201. Fractures (cause not specified).

202. Other external violence.

203. Violent deaths of unknown causation.

1090

XV. 204. Sudden death.

205. Cause of death not specified or ill-defined: (a) ill-defined; (b) not specified or unknown.

XIII.

1909 (continued).

185. Fractures (cause not specified); 185A. Dislocations; 185B. Sprains; 185c. Fractures (cause not specified).

186. Other external violence.

Would be included under 186.

1909.

XIV. 188. Sudden death.

 Ill-defined organic disease; 189. Cause of death not specified or ill-defined, and 189a.; 189a. No disease or feigned disease (morbidity statistics only).

Nature of Differences Between Lists.

A comparison of the two lists discloses that the 1920 revision, though retaining as far as possible the characters of the 1909 revision, is a marked improvement thereupon. Not only is the arrangement better, it also includes a greater amount of detail, presumably of value. This revision embodies the results of a considerable amount of methodological study, applied to the experience gained during the intervening eleven years. The lists of headings given, however, furnish but an inadequate conception of actual amount of work involved. In the 1910 publication of the Australian Commonwealth the number of diseases, or rather causes of death, indexed (including, of course, synonyms) was about In the United States publication of 1911, about fifteen months later, the number was no less than about 19,200, while in the 1920 list published in 1924 the number was slightly greater, roughly about 20,200. Thus in tabulating the index enables the death immediately to be referred to its proper place in the nomenclature list, simplifying the work of the tabulator to the uttermost. The lengthy American indexes are, of course, to be preferred, other things being equal, to the more brief list of the Australian nomenclature, published in 1910. It is immediately obvious that if the certification of disease or cause of death is correctly done, then the statistician's work is merely compiling the results. This, however, applies only when the cause is simple. If primary and secondary causes are given, this is no longer quite true. This will be dealt with later.

It may here be mentioned that the American indexes are cross-referenced; thus any significant word in a medical expression will appear in the index. This greatly facilitates any reference thereto. Also, in all the lists, "frequent complications" are given under particular titles, thus indicating terms that may be ignored when occurring in combination with a "primary cause of death."

DIFFICULTIES. Complex Classification.

The two main difficulties occurring in connexion with the classification of diseases are: (a) correct certification and (b) satisfactory treatment (that is, proper location in the list) when both the primary and so-called secondary or other causes are given. I shall deal with the latter first. First I may refer to a fundamental matter, namely, the conception of complex classification. I have already referred to

this. Vital statistics, as they are called, including the classifications of the causes of death, are already so cumbersome that but few countries use the extended lists which have here been given. For this reason a classification which aims at giving more than one cause may be ruled out as impracticable. Thus, however unsatisfactory this may be theoretically, it is idle to expect that diseases as causes of death, will be given even in pairs. The multiplicity of tables is not only costly to produce, but is also burdensome.

Joint Causes of Death.

When a physician indicates two or more causes of death upon a certificate, one cause has to be adopted for the purposes of tabulation. At the international revision of 1909, it was agreed upon the motion of Dr. Jacques Bertillon that the rules employed since 1900 should govern procedure and in the American publication of 1911 the rules as in the French edition of 1903 were given. So also the rules given in the introduction of the "Alphabetische Liste von Krankheiten und Todesursachen," of the Kaiserliches Gesundheitsamt of Germany, 1905, were given. These appear upon pages 18-19 of the American 1911 publication and the English procedure is also indicated. It is not proposed to give these in detail, nor to refer further to them.

In the "Introductory" of the American 1924 publication, it is stated that "it is now planned to publish shortly a second edition of the Index of Joint Causes of Death, based largely on the first edition but much more comprehensive, and, therefore, it is hoped, much more valuable." It is thus proposed to present the title numbers in combination, so that the abstractor can see at once to which cause the instance can be assigned, whatever combination of causes of death may appear on the certificate. This seems preferable to trusting to the judgement of even a thoroughly qualified abstractor. It insures identity of procedure in all compilations. It may be said that the whole scheme of the "International Nomenclature" is to make the procedure of the tabulator identical in every country and, of course, absolutely dependent upon the certification of the physician as to the cause of death.

Correct Certification.

The value of the statistical tabulations of causes of death obviously depends on the accuracy of the certifications by the physicians giving them. The tabulator does not attempt to vary these. For

examples, if the certificate simply gives croup as the cause of death, it is now entered under "10. Diphtheria"; if on the other hand it gives croup, not diphtheria, it is now entered under "98. Diseases of the larynx." In the 1909 classification the former was entered under "9. Diphtheria and croup"; but if called false croup, would have been entered under "87. Diseases of the larynx." In some cases changes have taken place in the groupings. For example acromegaly, which was relegated to "55. Other general diseases" in 1909, now appears under "59. Diseases of the pituitary gland"; or again exophthalmic goître, which had a number to itself, namely, 51 in 1909, now appears as a subsection of "60. Diseases of the thyroid gland."

The greatest difficulty in regard to correct certification arises from the fact that, at the present time, an open certificate is given and it was freely admitted, when I had the honour of addressing the Victorian Branch of the British Medical Association in 1907, that it was impossible "to get doctors to certify syphilis as such." Such a certificate as "cirrhosis of the liver, C₂H₆O," is not unknown; the physician did not like to write, for example, acute alcoholism. In general, physicians are naturally disinclined to intensify in any way the painfulness of the situation. I have to remember the Russian proverb, which may be expressed: "Death casts a sacred glamour over the deceased" or our more familiar Latin, "De mortuis nil nisi bonum."

There is a very easy way out of this difficulty; it is this. The certificate should consist of at least two parts, one certifying that the death was natural; this for the use of the family or representatives of the deceased; the other part is reserved for the purpose of statistical tabulation. The latter contains the real opinion of the practitioner, expressed without any reserves. It was the practice in Switzerland to do this. In this way it becomes possible for the true causes of death to be given. It is a sorry state of things, when one remembers the injuries to the human race from syphilis, that our statistical records are very unsatisfactory and that the number prejudice other records by being wrongly assigned to them.

It appears to me that the simplest solution is this. Let the State supply books of blank forms, each form being of three parts: (i) the butt-end, for the practitioner's own record; (ii) the mid-section with the true cause of death and an identification number, but no name, this for the purposes of tabulation only; (iii) the certification for the family and the Registrar of Deaths so that burial could take place. Of these the butt (i) would contain the identification number, the sex and age, and such further particulars as the medical practitioner thought fit. The mid-section (ii) would contain the identification number, the sex and age, the locality and the cause of death without reserve and such details as may be deemed necessary. It, however, would contain no name and would not be seen by the deceased's family or representatives. The section (iii) would contain only such information as would enable the burial to take place and enable the Registrar of Deaths to take such action as he deemed necessary.

Obligation Upon the Medical Practitioner.

Under such a system as has just been indicated, I should suggest that the practitioner should by law be required to hand to the family of the deceased the certificate for the Registrar and in a sealed envelope the certificate for the statistician. certification form and envelope should be official, supplied by the State, with the printed address thereon of the statistician. The legal obligation of the Registrar should be to see that he received the sealed envelope, purporting to contain the certification for the statistician and that he should post the same. The obligation upon the postal department should be to receive all such envelopes and deliver them to the statistician, without them bearing a stamp. I need hardly say that the public value of the improvement in the record of causes of death far more than compensates for the services indicated.

Form of Death Certificate.

The form provided upon the revised standard certificate of death in the United States of America, given on page 29 of their 1924 publication, is as follows:

The CAUSE OF DEATH (a) was as follows:

| (duration)yearsmonthsdays. |
|---------------------------------------------------------|
| CONTRIBUTORY (Secondary) |
| Where was the disease contracted if not at the place of |
| death?Date of operation |
| Was there an autopsy? |
| What test confirmed diagnosis? |
| (Address) |

(a) State the DISEASE CAUSING DEATH, or in deaths from VIOLENT CAUSES, state (1) MEANS AND NATURE OF INJURY, and (2) whether ACCIDENTAL, SUICIDAL, or HOMICIDAL. (See reverse side for additional space.)

On the reverse side of this certificate there are important detailed notes regarding the "statement of occupation" and regarding "statement of cause of death." In the system suggested in the preceding section, the latter would be for the practitioner and the former for the deceased's representative. It could be supplied by the latter and enclosed in the envelope or written in anticipation of the physician's statement on the certificate. Details may be seen on page 29 and 30 of the American list of 1924.

CONCLUSIONS.

Necessary Parliamentary Action.

It is twenty-one years ago since attention was called to the need for insuring correct certification of death. As far as I am aware nothing has been attempted. While the practitioner knows that he cannot in certain cases give the true cause, it seems hardly likely that he will take the matter with the

seriousness that might be expected if this difficulty were eliminated. The way of reform is slow. But it is desirable that such action should be taken, say, at a Premiers' conference, as would lead to a concerted small amendment of the acts governing the Registrar-General's functions and those governing the medical profession in the certification of the cause of death, in order to make possible confidential notification to the statistician. A small committee could very readily prepare the whole matter in each State, the Commonwealth Statistician being joined with them or presiding over the statistical advice.

Publications Which Should be Available.

As indicated already the Commonwealth Government published in 1910, the "1909 Nomenclature," a pamphlet of eighty-eight pages of Royal octavo. The United States has published a "Manual of the 1920 International List of the Causes of Death" of 302 pages of Royal octavo, excellently bound in cloth boards, for the extraordinarily low price of 70 cents per copy. In addition to this, they have also published a vest-pocket booklet, the "Physicians' Pocket Reference to the International List of Causes of Death." This was prepared and distributed directly to all physicians of the United States and to many thousands of local registrars through the State registration offices. I need hardly say that the example is well worth following. The cost would be insignificant and the advantage very great and it would help to make it easy for the compiler of vital statistics to do his work well. We should then, after all, be following in our own footsteps of eighteen years ago.

Since it will be some time before the revision of 1930 can be ready for publication, I think it would be well to publish a copy of the United States manual, after some revision, say, by a medical committee acting with the Commonwealth Statistician.

Preparation for the Next Revision.

After every revision of the classification advances in science generally and in medicine indicate the need of some change. Some evidence of this comes to hand in the compilation work of a statistical bureau. For this reason it is desirable that a special medical committee should be appointed, consisting of practitioners who have given not merely occasional but systematic attention to the subject, and who know its history and development, its limitations and in what way improvements are possible. It would be necessary to keep in mind the differences between statistics of morbidity and those of causes of death.

Experience has shown that the compiler in a statistical bureau, who daily sees the type of citations of causes by the practising doctors of a country, gets to know something of the limitations of their certifications and also whether all the diseases of the territory for which he compiles, appear in the classified list. For this reason it is desirable that, say, the Commonwealth Statistician, should be represented upon the local revision committee.

As it is but a short time before the next revision takes place, that committee should be appointed without delay and should at once get into touch with the Secretary General of the International Committee on the other side of the world. If time permits, it seems desirable that an Australasian congress of the organized medical profession on this side of the world should be given an opportunity of reviewing the results of the special committee's deliberations and of giving them, if possible, unqualified support or of offering criticism or suggesting considerations that indicate a need for any amendment deemed desirable.

Representation on International Revision Committee.

It need hardly be said that Australia should invariably be represented on the International Revision Committee and the person acting as representative should be one who has made a special study of the classification to be revised, from the point of view not of morbidity but of the certification of death. The coming into personal contact with other members of the Revision Committee is of great value for this work of international importance and facilitates later work in the same matter. Moreover, there is a measure of intellectual activity on the other side of the world, which is a stimulus enabling one to accomplish more than is easily possible when it is absent.

Permanence of Records.

In all parts of the world those who have given special attention to the statistical record of causes of death, seem satisfied that they can be of great service in studying the incidence of disease upon humanity and the amelioration of the various conditions. If so, it may well happen that the certified causes may from time to time be reviewed and the classification amended. This applies even with greater force if both primary and secondary causes are given. In the American suggestions to the practitioner it is stated that (i) he should enter the "primary cause with respect to time and causation, with its duration from the beginning of the illness," and (ii) also the "contributory cause or causes, secondary, with duration." It is added that "if the causes are entirely unrelated, one not being the result or complication of the other," the disease most important as the cause of death should be entered first, without regard to relative duration, the word secondary being struck out on the form.

If the records are kept permanently, it is obviously possible to review them in the light of subsequent discoveries as to the nature of disease.

Compilation by Nosological Expert.

. It has often been suggested that the compiler of vital statistics should be at least a nosological expert, in the sense of knowing something about the nature of diseases and their inter-relations. As a matter of fact, while perhaps it is not essential, it is undoubtedly desirable that the compiler should have given quite special attention to nosology and it is hardly possible for any person, likely to be

charged with such compilation in a statistical bureau, to fail in some measure to qualify himself. While therefore it does not appear necessary to require of a compiler that he should have graduated in medicine and surgery, such a graduate, I think, could after giving special attention to nosology and the classification of causes of death render services of high value. In this connexion perhaps I may be permitted to mention that extraordinary certifications sometimes come to hand. One I mentioned in my former address may be referred to. It ran: "Miscarriage at 51 months (male)." This was intended for the certificate for the death of a prematurely born child.

In this connexion it ought to be remembered that under the English system which, however, is not a good one, the Registrar-General has an officer called the Medical Superintendent who is a qualified man in medicine and a statistician of eminence as

Final Observations.

Meticulous critics often imagine that greater elaboration in statistical record is desirable. who have practical experience and who through this are aware how imperfectly data are supplied even now, are by no means certain that it would result in records of higher value. Anyone acquainted with the "Australian Demography" bulletin of 276 pages foolscap, published by the Commonwealth Statistician, will realize that there are practical limits to publication. One feature that demands comment is this. It is greatly to be regretted that age is very often incorrectly stated and consequently the frequency of death at given ages is not accurately deducible. Incidentally it may also be said that the frequency of maternity at given ages is also uncertain for the same reason.

Another matter of moment is the necessity of attributing death, whenever it occurs, to the initial cause, whenever that is some procedure that is presumed to avoid the danger of some disease and of death therefrom. Only in this way will the proper evidence be to hand as to the practical effect of the procedure. It is immaterial whether the death arises from some imperfection in the procedure or not; doubtless death is not infrequently due to imperfections in diagnosis and treatment; this is unavoidable, human beings being what they

Finally I may ask whether it would not be well to keep the public better advised as to the necessity of special safeguards against particular diseases at particular times. The late eminent statistician for the whole of Switzerland, M. Dr. Louis Guillaume, informed me that it was his custom to inform the authorities of any locality of any facts indicating the desirability of special precautions in respect of a particular disease. And the procedure was of high value.

I now leave the matter in your hands.

References.

⁶³ H. D. Rolleston: "An Oration on the Classification and Nomenclature of Diseases, with Remarks on Diseases Due to Treatment," *The Lancet*, May 22, 1909, page 1437.

(3) First Annual Report of the Registrar-General of Births, Deaths and Marriages, England, 1839, page 99.
(3) Sixteenth Report of the Registrar-General of Births,

Deaths and Marriages, England, 1853, page 73.

(b) J. Bertillon: "Cours Elémentoire de Statistique Administrative," 1895, pages 262 and 264.

(c) Transactions of the American Medical Association,

1872, Appendix.

THE TREATMENT OF A CORYZA.1

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Doubtless some will say: "Treat it with whisky." An alcoholic beverage affords a pleasant indulgence, but I doubt the wisdom of ever prescribing any for any patient under any circumstances.

Coryza shares with psoriasis the title of "the reproach of the medical profession"; the French say un rheume non traité dure deux semaines, traité il ne durerait que quinze jours, a cold untreated lasts two weeks, treated it would last only a fortnight.

The brother of a distinguished surgeon sat down by me at luncheon and said: "I've got a cold, a disease for which you doctors can do nothing." replied: "At least we understand something of prevention, so, if you'll excuse me, I'll go to another table to avoid infection from you."

Prophylaxis is, of course, the first requisite. Not only avoidance of the infected, but other reasonable measures such as the careful dusting of books from library shelves, suggested by Sir Lauder Brunton, are well worth consideration for, as the Medical Officer of Health for Sydney has remarked, coryza is perhaps the most potent cause of loss of time in industry.

Despite the prevailing pessimism there is much that can be done and conscientious pursuit of routine investigation and treatment will be well repaid.

The patient's nasal passages and accessory cavities should be thoroughly examined and ade-Adenoid vegetations, infected quately drained. tonsils, deflections or spurs of the septum nasi, hypertrophied turbinates et cetera may demand surgical treatment. I have to thank the late Dr. Andrew Brady for much valued help in such cases. I am indebted for assistance also to several other ear, nose and throat surgeons.

Where the coryza is only a symptom of another disease, such as measles or influenza, treatment must be directed chiefly to the latter.

Again we must search for any chronic debilitating affection, such as Bright's disease, gout, heart disease, diabetes or pulmonary tuberculosis, which may be a predisposing cause.

¹Read at a meeting of the New South Wales Branch of the British Medical Association on November 8, 1928.

Delicate children should be cautiously hardened and their resistance raised by generous but easily digested diet and cod liver oil, graduated exercise in the fresh air and sometimes by a series of immunizing inoculations.

In the treatment of an acute attack to which I now turn, various drugs have been recommended. Some use acetyl salicylic acid and a diaphoretic mixture or salicylate of soda.

I am grateful to Dr. Hardie Neil for introducing to my notice a powder consisting of 0.3 gramme (five grains) each of barbitone, pulvis ipecacuanha compositus and phenacetine, which may be taken with a hot drink at bedtime and even used once or twice a day if the kidneys be sound. Unfortunately one occasionally meets a patient who is supersensitive to barbitone and effloresces in a red eruption.

A very old fashioned remedy still favoured by many is six or even nine decigrammes (ten or fifteen grains) of pulvis ipecacuanhæ compositus at bed-

In case of fever an excellent mixture is:

B—Quininæ hydrochloridi 1.2 g. (gr. xx) Phenazoni 7.2 g. (3ij)

vel amidopyrinæ 1.8 g. vel 2.4 g. (gr. xxx. vel lx)

Spiritum ammoniæ aromaticum ad 60 mils (3ij).

Signetur: Take half a teaspoonful in quarter of a tumblerful of water every four or six hours.

Inhalations of various drugs from boiling water help. A simple one is 6.25 cubic centimetres of Friar's balsam to one litre (a teaspoonful to the pint) or better still:

B-Menthol 0.8 g. (gr. xij) Olei pini sylvestris 10 c.cm. (3iij) Tincturam benzoini compositam ad 60 c.cm.

which may be used in the same way.

Cresol volatilized over a lamp, placed so that the fumes drift over the sleeping patient's face, often gives ease. Elegant preparations are marketed by well known manufacturing chemists.

But perhaps the best inhalation is the following, which is used "dry."

B.—Liquoris formaldehydi 2.6 c.cm. (m. xlv) Olei menthæ piperitæ 1.75 c.cm. (m. xxx) Olei pini pumilionis 5.3 c.cm. (3iss) Alcohol absoluti 15 c.cm. (3ss). Ætherem purificatum ad 60 c.cm. (5ij).

An excellent nasal ointment is:

B.—Thymol

Menthol Acidi carbolici ana 0.12 g. (gr. ij) Lanolini Paroleini ana 14 g. (3iv). Fiat unguentum, dispensetur in tubo metallico.

The chest may be rubbed with linimentum camphora or oleum eucalypti or with equal parts of linimentum terebinthing aceticum and olive oil.

After the cessation of any fever the old fashioned citrate of iron and quinine mixture is one of the best astringents:

B-Ferri et quininæ citratis 0.6 g. (gr. x) Liquoris strychninæ 0.3 mil (m. v) Spiritus chloroformi 0.9 mil (m. xv) Glycerini 3.5 mil (3j) Aquam destillatam ad 15 mil (3ss). Fiat mistura.

It is essential to teach patients to avoid reinfecting themselves by snuffling.

The directions for the employment of the various remedies suggested above and for general treatment which I am accustomed to give to patients are set out at length as follows.

Treatment of a Coryza.

How to Treat a Cold.

Coryza, often called "cold in the head," has little or nothing to do with cold, but is an infectious disease caught from another sufferer.

It is caused by germs and is prevalent in cold wet weather because people then gather together in close rooms and so infect one another. For this reason Pro-fessor Leonard Hill has suggested to call it "fugg."

A succession of colds may depend on a deeper-seated illness which reduces one's natural resistance to germs; the patient may require special treatment and should take medical advice.

A valuable measure in a severe attack of coryza is rest in bed, as advised by the Director-General of Health in epidemics of influenza. Even one day in bed is a valuable check; also it may save the patient from infecting others.

Unless the bowels be well opened a brisk purge should be taken.

Whether in bed or up and about the patient requires air all day and all night. Windows should be open, except while one is dressing or in the fiercest storm: during the patient's absence from the room the wind should be allowed to blow through freely so as to carry away all germs and entirely change the air of the room in a few minutes.

If a cold threaten, as suggested by sneezing, stuffiness and running of the nose, a feeling of fullness in the head or depression and chilliness, take a hot bath and go at once to a warm bed: there have the chest rubbed all over, back and front, above the shoulders and under the armpits, with camphorated oil or olive oil and eucalyptus or with a special liniment: take a powder dry on the tongue and wash it down with a hot drink, such as:

1. Lemon juice and hot water with a little sugar; 2. Hot milk, plain or with cinnamon or nutmeg;

 Broth or beef tea;
 "Benger's Food" or gruel; 5. A cup of tea or even

6. A glass of hot water.

Now blow the nose gently but thoroughly: do not grasp both nostrils and give a sudden explosive blow; but draw a deep breath, close the mouth and one nostril, leave the second nostril wide open and blow it out; then blow out the first nostril in the same way. Now take a small piece of the cintment, about the size of a grain of rice on the tip of the clean little finger and wipe it off within one nostril: it should not be pushed up nor back, but only introduced within the entrance; put a second piece in the other nostril; lie back with the head on the pillow and the nose up and breathe gently in through the nose; the warmth will melt the ointment and it will flow in a smooth, pleasant stream over the membrane of the nose and aid in keeping it soft and sweet; the antiseptics in it will help to disinfect, the lubricant will prevent the formation of crusts so that next day the nose will be more easily cleaned on blowing. Further, it will protect the lip against "cold sore." If much of the ointment be used it merely runs back into the throat and one hawks it out.

Never snuffle! Snuffling may draw back discharge into the recesses of the nose and neighbouring parts and spread infection to the ear, the throat or the chest. When-ever any secretion collects in the nose, blow it gently out. This requires a large supply of handkerchiefs or pieces of clean cloth or soft paper, which latter may be burnt so as to destroy the germs in the secretion. If the nose be tender it is wise to wipe it with absorbent cotton.

Be careful to prevent any spray ejected in sneezing, coughing, laughing, blowing the nose or clearing the throat from going on to others; hold your handkerchief close to your mouth and nose to catch it. Do not kiss

others.

Put three or four drops of the inhalation on a clean handkerchief and inhale the fumes; take them in through the mouth and exhale them through the nose; do not use this freely until you are accustomed to it as on first use it may smart a little or induce cough. If the handkerchief be folded and in the pocket or under the pillow the inhalation escapes but slowly and so need not be renewed on it more often than three or four times a day; thus nine to sixteen drops should suffice for twentyfour hours; inhale a few whiffs ten or twenty times a

Except when using the inhalation try to keep the mouth

closed and to breathe in and out through the nose.

The diet should be simple: eggs, milk, milk pudding, stewed fruit, baked apple, jelly, junket, bread and butter, jam, broth, beef-tea, "Benger's Food," boiled or steamed fish or even plain meat and vegetables if you are hungry. Hot fluids loosen the secretion and give ease.

Take an aperient if need be.

The clothing should be light and loose, but sufficient to keep you comfortably warm. Heavy clothing causes perspiration and increases the tendency to attacks.

If the cold does not respond to this treatment, you may require a special mixture for fever or other complications

and a specific tonic in convalescence

If special remedies are not available, you may at least use rest, air, caution in diet and an aperient; above all blow the nose and do not draw back any discharge. simple antiseptic ointment such as weak boracic or zinc oxide will do in an emergency. Ten grains of Dover's powder for an adult is a substitute for the special bedtime powder, but is poisonous for a few patients. Spirits of peppermint may be used in place of the "dry" inhalation. Inhalations of steam impregnated with Friar's balsam (a teaspoonful to a pint of boiling water) suit some and children may get benefit from the fumes of a cresol lamp.

PROPHYLACTIC OBSTETRICAL PRACTICE: A ACCOUNT OF SEVEN HUNDRED AND SIXTY-EIGHT CONSECUTIVE CONFINEMENTS, WITH FORCEPS DELIVERY, IN GENERAL PRACTICE.

By H. Leighton Kesteven, D.Sc., M.D., Ch.M. (Sydney).

For over ten years it has been my practice to apply forceps at the earliest moment compatible with safety. During that period actual brief records have been kept of seven hundred and sixty-eight cases. In all I have delivered well over one thousand women of their babies with forceps, but prior to the period I write of no records were kept, so that it is not possible to include the earlier cases in this review. I may, however, be permitted to explain

that it was the uniform success met with in these cases that led to the keeping of records.

Briefly, my practice has been to apply forceps as soon as it has appeared possible to deliver a woman of her child without injury to cervix or perineum.

This contribution is, then, a statement of the results of seven hundred and sixty-eight consecutive confinements with forceps delivery, a brief description of my precautions against puerperal sepsis and a defence of my very radical practice.

Results.

| Maternal Mor | tality: | | | | | |
|-------------------------|------------|--------|--------|------|---------------|------|
| Deaths | | | | | | 1 |
| Fætal Mortali | ty: | | | | | |
| Prenatal e | | | | | | 5 |
| Natal dea | ths | | | | | 0 |
| Neonatal | deaths | | | | | 6 |
| Maternal Mori | biditu: | | | | | |
| Post partu | | ia | | | | 29 |
| Non-union | | | | | | 1 |
| Non-union | of cervi | ical t | ear | | | 1 |
| Post parte | um hæme | orrha | ge | | | 0 |
| Perineal to | ears which | h hea | iled ' | with | out | |
| trouble | | | | | | 58 |
| Cervical | tears wl | hich | heal | ed | un- | |
| eventfull Incised of | ly | | | | | 1 |
| | | | | | led | |
| well | | | | | | 18 |
| Infantile Morb | idity: | | | | | |
| Superficial | abrasi | ons | of f | ace | \mathbf{or} | |
| scalp | | | | | | 37 |
| Hæmatoma | ata of so | ealp | | | | 4 |
| Hæmatoma | a of stern | o-ma | stoid | mu | scle | 1 |
| Malpresentatio | ns at D | eliver | ry: | | | |
| Occipito-po | osterior | | | | | 2 |
| | | | | | | 2 |
| Malpresentatio | ns Corre | cted | Befo | re 1 | Delin | eru: |
| Occipito-po | osterior | | | | | 191 |
| Breech | | | | | | 8 |
| Transverse | | | | | | 7 |
| Face | | | | | | 27 |
| Shoulder | | | | | | 1 |
| | | | | | | - |

Cæsarean section has been performed once, pubiotomy five times. Twins were met five times.

Reviewing these mortalities and morbidities, the single maternal death resulted from shock after accouchment forcé in the presence of placenta prævia. Delivery of a woman of an eight months baby was successfully effected with but little loss of blood at half past four o'clock in the afternoon. At about half past seven her condition was absolutely satisfactory, pulse full and slow. She collapsed just after eight o'clock and died in a few minutes. The baby is alive and well. There was no laceration of the cervix.

In regard to the neonatal deaths, two of the infants survived for several weeks and died slowly without presenting any tangible symptom whatever: the other four died within twenty-four to fortyeight hours. The presentation of one of these was occipito-posterior. The child was turned before

¹Read at a meeting of the New South Wales Branch of the British Medical Association on November 8, 1928.

delivery. In the other instances the presentation was anterior and the births presented nothing to make notes about.

The perineal and cervical tears that failed to unite, occurred in the same patient, a primipara, aged thirty-two. The head was engaged in the occipito-posterior position on my arrival. I was unable to rectify the malposition. The patient lived eighteen miles out. I saw her again on the day after the birth, but not thereafter. The nurse in charge told me the patient was doing well. I have never seen the patient since, but I believe that I was correctly informed that neither wound healed and that, I assume, is why my services have not been required since.

It would serve no good purpose to itemize the various possible accidents of parturition merely to state that they have not been met in my series, but an exception has been made in the case of post partum hæmorrhage, because in the experience of most of my colleagues it is one of the most frequent of the accidents fraught with grave danger to the mother. It is contended later that its absence from my series is one of the very definite gains attribut-

able to the practice adopted. My series has been singularly free from worrying troubles of pregnancy. I have seen but one patient with pernicious vomiting of pregnancy. Albuminuria was detected in seventy-nine. In all but six of these it proved to be of renal or vesical origin on microscopical examination of the centrifuged sediment and cleared up with satisfactory promptitude on appropriate treatment with one exception. Though of apparently renal origin, the albumin in this patient persisted right up to the birth in distressing quantity, with numerous cellular and granular casts and cleared up almost immediately The condition in six patients was post partum. diagnosed as preeclamptic toxemia and was treated with a course of salines and careful dieting. One only continued to cause anxiety. In this case the pregnancy was terminated at eight months; both the mother and her baby are alive and well today. I have confined the mother once since without any reappearance of the trouble.

Briefly, then, I have resorted to forceps delivery in seven hundred and sixty-eight consecutive confinements and the damage resulting from my radical methods is as follows: One mother has a perineum which needs repairing, one has a badly lacerated cervix and six of the infants died very soon after birth. This assumes that all six deaths were the direct result of my instrumental interference, an absolutely unjustifiable assumption.

Conceivably one or two of the neonatal deaths were due to cerebral injuries, though as stated above there were no outward signs of forceps pressure in any notable degree. I am of the opinion that the single occurrence of ununited perineal and cervical tears which stains my otherwise clean record, was absolutely unavoidable once the head had become engaged. Had the wounds been properly attended to I have no reason to doubt that they would have healed as did the fifty-six other tears that I repaired.

Before proceeding to discuss my methods in further detail I should perhaps state that twenty-nine premature births, attended during the time I have been keeping records, have not been included in the series. Gestation had proceeded in these women to from six to eight months. There were no maternal deaths and sixteen of the infants lived more than three months; nine of them are still living and are quite healthy children. One died at the age of three years from acute ileo-colitis and one at the age of six from broncho-pneumonia following measles. Nearly half of them were in malpositions; actually thirteen; only eleven were delivered by forceps; all these were high applications.

In order that all may be quite convinced that this work can be carried out by each and every busy general practitioner, I may perhaps be permitted to describe briefly the relevant factors in my own practice at present. I am residing in a small country town in New South Wales, my patients are for the most part the wives of small farmers and teamsters and the labouring classes of the town. My practice is an unopposed one, that is to say I have no resident colleague. My nurse is an elderly dame who never saw the inside of any hospital, unless perchance she has been an inmate of one during some past illness. She understands that I object to her testing the heat of the water used with her finger and that I have a fad that basins should be carried "just so" and is very careful not to offend by carrying in the "proper" fashion. She uses much "Lysol" in the washing of her hands and would not dream of even administering oil to a patient without my consent. In short, she is absolutely ignorant and absolutely trustworthy. There are many women like her practising as obstetric nurses in sunny New South Wales.

Some description of my technique appears to be called for. After I return from the last case the instruments are washed again and placed in a towelling bag. This is then placed in the sterilizer and subjected to steam at atmospheric pressure for half an hour and then to hot air for a similar period. The water is now poured from the lower container of the sterilizer and the bag containing the instruments is placed in it. The lid is strapped down firmly with a leather strap. My gloves after use are washed with soap and water, dried with a towel, powdered with any dusting powder available and tied up in a huckaback pocket. On arrival at my patient's house my first care is to pour boiling water on the instruments in the lower part of the sterilizer. Should this be cold when the instruments are wanted, it is a simple matter to pour more boiling water on to them. Abdominal palpation or other evidence having indicated that a vaginal examination is called for, the gloves are put on dry with the aid of any dusting powder available and they are then washed with pure undiluted "Lysol" or other equally reliable disinfectant for not less than two and a half minutes, care being taken to work the "Lysol" very thoroughly all over the gloves all the time. Before carrying out the examination

the "Lysol" is rinsed off in the water covering the instruments.

Should this examination reveal that the external os uteri is quite soft and yielding and that the forceps can be applied, the patient is anæsthetized and labour terminated at once, the gloves being again washed in "Lysol," as before, prior to the application of the forceps.

Experience enables me to state that unless the first stage of labour has been unduly prolonged, it is perfectly safe to apply the forceps in the presence of a soft, elastic and yielding external os uteri as soon as they can be introduced.

If, on the other hand, the first stage has been prolonged so that the pains have obviously weakened, then in every case the patient should receive a sufficient dose of morphine by hypodermic injection to induce two or three hours' uterine quiescence. In the majority of cases 0.015 gramme (a quarter of a grain) has in my experience proven sufficient. In those patients in whom this has been insufficient, I have believed that the first injection could safely have been done without, but the policy having been commenced, it must be carried out.

It may be stated confidently that not more than two to three hours should be allowed to elapse between the final obliteration of the cervical canal and a sufficient degree of dilatation of the external os uteri to permit of forceps delivery. Should it be found at the end of that time that dilatation has not proceeded to the desired degree, then one has to deal with either inefficient pains or a rigid external os. If the latter condition be present, the os should be freely incised on both sides and delivery effected without further delay, that is, of course, provided the pains are strong. For the incision I prefer a long handled pair of scissors. If the former condition, I dilate the external os uteri by hand.

Malpresentations and anhydramnios have deliberately not been mentioned as causes of delay in the dilatation of the external os, because malpresentations should not be permitted to persist and anhydramnios should be recognized long before the delay can occur. In the presence of anhydramnios, either primary or secondary as the result of early tearing of the membranes, if, as is usual, there be delay in the dilatation of an elastic and yielding os, the dilatation should be effected by hand, a tedious and painful process, productive of cramps of the fingers and thumbs, but if the patient be lightly anæsthetized and right and left hands be used alternately, care being taken to wash the gloves with "Lysol" every time they are permitted to come into contact with aught but the vaginal walls, it is absolutely free from risk to the mother or child.

It has been my practice to suture the incisions in the cervix twelve to twenty-four hours post partum and any perineal tears immediately after delivering the afterbirth.

It has been my invariable practice to expel the placenta by abdominal pressure, as soon as that is possible without causing undue pain to the patient. I am convinced that the sooner the uterus is completely emptied, the better.

Of course, I am well aware that my practice is absolutely radical and contrary to all teaching. It is open to me to say that the proof of the pudding is in the eating and to leave it at that. But my conservative colleagues may contend that, whilst my practice has yielded most excellent results in my own hands, it is not based on solid principles and cannot be regarded with equanimity.

I would therefore state the principles which underlie my practice and discuss them.

The principles are three in number: (i) Malpositions must be corrected before delivery; (ii) post partum inertia of the uterus must be prevented; (iii) the mother must be relieved of avoidable pains.

It may be stated without fear of contradiction that the great bulk of maternal and infantile mortality and morbidity is directly traceable to accidents of parturition and result from uncorrected malpositions and from post partum inertia of the uterus.

The birth of the child in any but the occipitoanterior position is commonly productive of one or more of the following complications: laceration of the cervix, rupture of the perineum, delay and uterine exhaustion and more rarely rupture of the uterus, bladder or rectum. Laceration of the cervix is probably the commonest cause of puerperal septicæmia. Post partum inertia is, of course, the one requisite for grave post partum hæmorrhage. I need go no further along these lines; the actuating principles of my practice are unassailable; beyond cavil they present two at least of the outstanding desiderata in obstetrical practice.

The intent to apply forceps as early as is possible invariably leads to the discovery of malpositions before they have become engaged in the pelvis and then with one hand in the uterus or vagina and one on the abdomen the malposition is quite easily corrected before the forceps are applied. The policy of "masterly inactivity," so persistently advocated by our teachers, leads to the obstetrician being called to the bedside after the child has become engaged. No amount of ante-natal care will insure that there will be no malposition at confinement.

If the labour is terminated only whilst the uterus is contracting strongly, that uterus is not exhausted and there will be no post partum hæmorrhage. A recent report to the Obstetrical and Gynæcological Section of the Victorian Branch of the British Medical Association laid it down that the indications for the use of forceps are three in number. Number one reads: "impending or actual maternal distress."(1) It is difficult to know just what this means; most mothers are in distress from the onset of labour. If it means uterine distress or failure or actual collapse of the mother which is commonly accompanied by uterine exhaustion, then to my way of thinking and acting this should have been stated as one of the most emphatic indications for withholding the forceps and inducing uterine quiescence with morphine.

It is, however, a fact that the interpretation I have put upon the sentence quoted is that which fits in with general practice. Most obstetricians regard

forceps as having been designed to deliver overlarge heads, malpositions and any position or size of head when the uterus appears as though it would fail to complete the job itself; this indeed is what is taught. I have learned from over one thousand patients attended in general practice that neither of the two latter conditions need be allowed to develope. Since this is so, it follows that the obstetrician who permits their occurrence, is at fault and this should be taught.

I have been asked by my confrères: Can your practice be safely taught to the medical student? I have not the slightest doubt that it can and should be taught. I submit that the operation of applying the midwifery forceps is simplicity itself when compared with the simplest abdominal operation, yet students learn these operations merely by watching others perform them and then depart and perform them quite successfully themselves.

May I introduce a brief word about my method of using the forceps and vaginal sterilization? That mark of interrogation applies as much to the word in front of it as to the request conveyed in the sentence. When I find a copious leucorrhœal discharge or know of or suspect the presence of gonorrhea, I proceed as follows. Several pieces of old calico or linen about six inches square are laid in the bottom of a small basin which has been thoroughly swabbed out with undiluted "Lysol." They are then saturated with "Lysol" and boiling water is poured on them not sooner than three minutes later. These are then wrung as dry as possible with the gloved hand and the vagina scrubbed firmly with them. I deprecate the use of vaginal douching at any stage of parturition or of the puerperium.

I always use Milne Murray's axis-traction forceps and I find that in the great majority of cases the small amount of traction that is unavoidable if the traction handle is to be kept truly parallel to the forceps handle, is all sufficient to effect delivery. When the head descends on to the perineum, it is not infrequently necessary to retard its progress in order to protect the perineum from the rupturing effect of powerful expulsive forces. Please note that last statement carefully; the forceps are used not to extract the fœtus, but to retard its rate of

progress, to hinder it.

On May 14, 1921, there appeared in The British Medical Journal an address on the prevention and treatment of puerperal infections, delivered by Dr. W. Blair Bell, and a leading article inspired by the address appeared in the same number of the journal. Both the authors ask the general practitioner to adopt the policy of masterly inactivity towards his confinement patients and, if this must be departed from, to bring to them all the precautions for asepsis that he would adopt in the performance of an abdominal operation.

To the former of these seemingly reasonable requests the rank and file of the profession has replied quite emphatically, both in word and in deed: I will not and I can not!

In the face of the very definite attitude of both the public and the profession in this matter it is

futile for obstetrical authority, ensconsed in a professorial chair or entrenched behind the walls of a large lying-in-home, to continue advocating a policy which the profession has refused to adopt for over fifty years, although every member of the profession has been trained in this particular policy.

Reference has already been made to a report on the standardization of obstetrical treatment, made by a group of obstetricians to the Obstetrical and Gynæcological Section of the Victorian Branch of the British Medical Association. (1) This report is of interest, not because it was in any way a contribution to obstetrical knowledge, but because it recapitulated with the voice of recognized authority the standard teachings of the day and because it was followed in the same journal on April 9 by a critical comparison of the standards adopted with the teachings of William Leishman as published in his "System of Midwifery" in 1873-fifty-five years ago. This critical comparison was compiled by Dr. J. B. Dawson and there has been no suggestion that the comparison is not fairly carried out. Extracts are taken from both publications and printed side by side. They demonstrate that the principles of obstetrical teaching have been static for the last fifty-four years.

The conclusion is drawn that the improvement which should have followed our mastery of the principles of asepsis, is more than counterbalanced by neglect of the established principle of masterly inactivity under the misapprehension that asepsis can be obtained with weak solutions of "Lysol" and there is probably a great deal of truth in the conclusion. I am most emphatically of the opinion that in every case of puerperal sepsis the infecting organisms have been introduced from outside the vagina and that normally the vaginal flora contains no pathogenic organisms. It should be accepted unreservedly by the profession that every case of puerperal sepsis takes its origin from carelessness on the part of the medical man or the nurse; there

is always the nurse.

If the vagina harboured pathogenic organisms, then beyond a shadow of a doubt my series of seven hundred and sixty-eight consecutive forceps cases would have presented an infinitely greater number of post partum pyrexias than it did. In the great majority of the cases I have deliberately refrained from any attempt at cleansing of the vaginal walls.

Writing on the indications for interference during

labour R. N. Wawn (2) says:

On the other hand even in the absence of any obstruction or inertia the patient must not be allowed to go too long in the second stage if pains have been satisfactory and regular, as the child will suffer. Forceps are used much more frequently in private practice than in hospital and if they are applied properly and if sufficient care is exercised in their use, they become in many cases a help to the patient by eliminating the last expulsive and bearing down pains. Forceps used in a skilful manner with a down pains. thorough knowledge of their use and action save more (many?) perineums from the severe lacerations that result from the efforts of the mother.

These statements are of particular interest, as they indicate a want of faith in the policy of masterly inactivity on the part of a surgeon holding a senior position on the staff of a women's hospital, one who is, therefore, presumably a teacher. Such statements are frequently made by the general practitioner, but it is seldom that having attained to the position of a teacher, the erstwhile general practitioner has the courage of his own practice.

Hubert Jacobs⁽³⁾ penning much solemn nonsense in defence of masterful inactivity, writes of "meddlesome midwifery":

There would appear to be three reasons for this. Firstly, the physician through faulty diagnosis and probably ignorance of the mechanism of labour, falls to recognize some minor peculiarity in an otherwise normal woman. . . Secondly, the physician though fully aware of all the features of the case, wishes to terminate it quickly in order to fulfil another engagement. Thirdly, the attendant is urged and encouraged by both the patient and her relatives to secure an early and rapid delivery.

Jacobs quotes an editorial in the same journal which puts this last factor more emphatically: "If the general practitioner refuses and continues to refuse to be party to this form of meddlesome midwifery, his services will not be required on future

occasions or for other patients."

None of these quotations is news, far from it they are wearisomely stale, but they constitute a fair statement of the problem which obstetrical authority obstinately refuses to face. The first is the very natural outcome of the teaching and the second and third the reason for the very constant adoption of meddlesome midwifery by the general practitioner. The general practitioner has been taught to leave the patient alone unless he detects some abnormality. If the abnormality is a gross one he hurries the patient away to a maternity hospital; if it is not of that order, he discovers it only when the trouble is too far advanced to rectify. He applies his forceps only late in the labour under the urge of the "other engagement" or of the patient or relative or in the presence of a complication. It may be stated quite confidently that disproportion between head and bony passage can be determined with certainty in very many cases only by vaginal examination. The same may be said, but as applying to fewer cases, of malpositions. It is only the fortunate member of a maternity hospital staff, with the experience of many abnormal as well as normal cases, who becomes sufficiently expert to rely confidently on the findings of abdominal palpation. Under these circumstances it is but natural that the general practitioner should make mistakes and fail to recognize minor abnormalities. These minor abnormalities are the causes that yield the mortalities and morbidity in his practice and his shortcomings are the direct result of the adoption of the conservative policy so long advocated. The other two factors are very real and have to be reckoned with; it is and always will be beyond our power to remove them. Assuming that we can root out the members of the profession who are willing to increase their pecuniary harvest by the practice of meddlesome midwifery, we should still find that all the propaganda in the world would not persuade the parturient woman that her pains are good for her; she is quite willing to believe it at other times, but not while she is bearing the pain, and we shall never be rid of the conscienceless members of the profession.

In an exceedingly fine essay on the causes and prevention of maternal morbidity and mortality by E. Sydney Morris⁽⁴⁾ we find the following statement:

The experience of the last half century has brought about an improvement in obstetric technique not only in regard to the ideal of asepsis, but also in so far as the indications for and the limitations of the various operative procedures are concerned. . . Further, during the last quarter of a century the importance of ante-natal examination and supervision of pregnant women has been progressively more and more recognized. One would naturally anticipate that these improved conceptions would by now show some definite and beneficial results in a reduced maternal mortality. Not only is there no evident reduction during recent years nor even a retention of the status quo, but instead we are faced with a definite tendency towards increased maternal mortality.

The technique has advanced, but it has not been availed of by the teachers; instead, all this time they have obstinately endeavoured to maintain the science in a condition of stasis. They have made the mistake of trying to mould conditions to their teachings instead of recognizing the conditions as fixed and modifying their practice and teachings to cope with problems those conditions set. Truly "the scantily diminished yearly mortality (in obstetrics) constitutes a standing reproach to the medical profession." (5)

After over fifty years of vain endeavour to impose the practice of masterly inactivity on the profession and the public it is high time the utter vanity of the endeavour were realized and some other policy tested.

In previous pages I have offered another policy. Its success is striking. One more illustration to stress this. In The Medical Journal of Australia of June 26, 1926, A. J. Gibson reports one hundred cases of persistent occipito-posterior presentations with two maternal and eleven infantile deaths. In my series one hundred and ninety-one occipitoposterior positions were corrected before delivery with one death of an infant. It is, of course, not contended that all these would have proven persistent occipito-posterior presentations. I did not indulge in masterly inactivity, I turned them and delivered. Dr. Gibson's rate in hospital practice was 11%, mine in general practice was a mere trace over 0.5% in nearly two hundred possible persistent presentations and any practitioner can obtain similar results if he will adopt my prophylactic procedure.

Puerperal sepsis is responsible for one-third of the maternal mortality in obstetrics the world over and I did not see one case in all my series.

I believe that the secret of my success in this respect lies in the fact that I knew that I would need my forceps at the next confinement I would be called to, and they were therefore always ready sterilized, not merely lying handy in the bag in case they were wanted and in the fact that I always use undiluted "Lysol" in place of ridiculous dilutions; together with the fact that I do not try to

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delude myself into the belief that I can sterilize the pudenda. I have the pudendal hair clipped with a pair of close cutting clippers and the pudenda washed and then separate the *labiæ* as far as may be with one hand before introducing the other into the vagina.

In this connexion may I suggest to the gentlemen who have in hand the preparation of the next editions of the text books in obstetrics that they introduce a critical chapter on the germicidal value of dilutions of standard disinfectants. Perhaps when the general practitioner is taught that it takes a 10% solution of carbolic acid over an hour to destroy completely the vitality of a culture of streptococcus, he will abandon his use of a dessertspoonful of "Lysol" in a bedroom basin of water as a means to sterilization of his instruments. If my figures here are not quite correct the gentlemen in question might usefully correct me. Speaking from memory, the correct figures are startling or should be to many of our confrères.

A friend of mine suggests that there may be something to say for these weak dilutions of "Lysol." "Assuming that germs have a sense of humour, they may be tickled to death by them."

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Reports of Cases.

SURGICAL COMPLICATIONS OF ENDOMETRIAL CYSTS.

By Alan E. Lee, M.D. (Melbourne), F.R.C.S. (England), Relieving Assistant Surgeon, Brisbane General Hospital.

SEVERAL recent published case reports and discussions in THE MEDICAL JOURNAL OF AUSTRALIA have pointed to a widespread current interest in endometrial cysts. The fact that in my experience recent graduates of our Australian schools have usually shown no knowledge of this subject and especially since the secondary complications of endometrial cysts invest them with more than a narrow gynæcological interest, I have thought it worth while to publish the case histories reported below, both being met within a relatively short space of time during the course of ordinary surgical emergency practice.

Rupture of Endometrial Cyst Simulating Intraperitoneal Rupture of an Ectopic Pregnancy or an Acute Peritonitis.

The patient, a single female, aged twenty years, had presented no symptoms prior to the day of operation, except for some pain, lately increasing, accompanying her menstrual flow. Menstruation had just finished. On the day of operation in the morning the patient experienced a

sudden lower abdominal pain, of cutting character, which passed off after a few minutes. Several hours later severe constant pain centred round the umbilicus began and had continued till her admission to hospital during the afternoon.

On examination the lower abdomen was held rigid on both sides up to the level of the umbilicus. Diffuse tenderness was present across the lower part of the abdomen, especially in the right lower guadrant.

especially in the right lower quadrant.

Under general ansethesia the abdominal cavity was opened through a right paramedian subumbilical incision. Chocolate coloured changed blood was encountered on incising the peritoneum. In the pouch of Douglas could be felt a cystic mass, eight centimetres in diameter, which emptied on pressure, producing more of the chocolate material. On exposure the cyst was found to be adherent to the posterior wall of the uterus and the right broad ligament and to be contained in the right ovary. The cyst, together with the right tube and portion of the broad ligament, was excised and the pelvis mopped clean. The abdomen was closed in layers without drainage. Convalescence was uneventful.

Discussion.

Possibly the fact that this patient presented an obvious acute surgical emergency may in some degree atone for the incomplete investigation made prior to operation. Had a rectal examination been made and in addition endometrioma remembered in the differential diagnosis, I feel now that a correct diagnosis would have been made.

We have here a quite definite clinical picture. An acute intraperitoneal hæmorrhage has occurred from a pelvic adnexal tumour that cannot be due to pregnancy (as shown by normal menstrual cycle and a history and signs of virginity) at a time closely coinciding with the menstrual flow. In addition there is a history of increasing dysmenorrhæa in the recent past. This group of symptoms and signs appears pathognomic of a ruptured endometrial cyst.

Acute Intestinal Obstruction Due to Adhesions Around an Endometrial Ovarian Cyst.

A woman, aged thirty-seven years, gave a three days' history of acute colicky pain centred just above the umbilicus and accompanied by vomiting. The bowels had not acted or flatus been passed during this time. The patient had noticed that the lower part of the abdomen was getting progressively larger during the past six months. Menses had been regular, the last time three weeks ago.

On examination the lower part of the abdomen up to the umbilicus was occupied by a tense cystic tumour in the mid-line. To the right side and apparently attached to it was a small hard mass. In addition to the tumour there was generalized abdominal distension. On vaginal examination the cervix was found to point downwards and forwards. The posterior fornix was occupied by a dense mass.

The abdominal cavity was opened through the scar of a previous section (nature of operation unknown). Omental adhesions were separated. Free fluid was present in the abdomen and coils of distended small intestine presented. The tumour mass was firmly embedded in the pelvis and could not be delivered at all into the wound. The cystic region of the mass was explored with a syringe and white inspissated material obtained. This region was incised and a quantity of this fluid, mixed with material resembling hair, was removed. Behind this cyst a second cyst could be seen presenting and it was incised. A very large quantity (more than a litre) of chocolate fluid was obtained and the mass largely collapsed. It was now seen that the hard mass to the right of the tumour was the uterus. Both large and small intestines were intimately adherent to the mass and the point of obstruction appeared to be at adhesions of ileum to the posterior uterine wall. These were freed with difficulty, a tear of the bowel wall occurring in the process. This was closed with two layers of catgut sutures. An attempt was made to extirpate the cyst by separating it from within the broad ligament. This proved an operation of extreme difficulty and was abandoned when a length of ten centimetres (four inches) of the left ureter was found apparently incorporated in the wall of the cyst. A large tube was sewn into the cyst and the remainder of the parietal incision closed with three layers of suture.

Following this operation the lower part of the abdomen remained fairly distended, but the bowels acted quite regularly. The discharge from the cyst, however, soon acquired a fæcal odour and the patient's condition slowly deteriorated. Fifteen days after operation she died, apparently from toxic absorption from the cyst's contents.

Discussion.

According to Sampson, the following stages can be observed in the evolution of an ovarian endometrioma. The primary deposition (or perhaps growth) of endometrial tissue on the surface of the ovary is followed by a process of burrowing into the tissue beneath it, with the formation of an endometrial-lined cleft. The chocolate menstrual exudate oozes out of this cleft and, possessing pronounced adhesive properties, gums the free opening of the cleft to any neighbouring organ, commonly the posterior surface of the uterus. The closed cavity thus resulting enlarges with each succeeding menstruation till the contents of the "chocolate cyst" so formed come under such tension that some escape occurs through the weak area of the adhesions.

This leaking material, itself containing live endometrial cells, may be spread over considerable areas and as the result of its dual properties of growth and adhesion, ultimately results in the formation of a dense matted mass filling the pelvis and involving in itself all the organs having the pelvis as their habitat.

This second case illustrates such a late result, whereas the first had only reached the stage of ovarian cyst formation with rupture and abnormally rapid emptying through its adhesive closure.

An earlier stage still, the presence in an ovary of a small inclusion cyst with chocolate contents, is said to be a commonplace of gynæcological surgery, being seen, so some observers say, in about 10% of pelvic explorations.

RECURRING MEASLES.

By Sydney J. Woolnough, M.B., Ch.M. (Sydney), Blackheath, New South Wales.

On September 27, 1928, I was called to B.D., actatis seven years, whom I found to be suffering from measles. The attack was a perfectly typical and rather brisk one. The temperature reached about 39.4° C. (103° F.) during the fastigium. The course and recovery were uneventful and uncomplicated and the child appeared perfectly well.

On November 11, 1928, I was called again and found the child with a temperature of 40° C. (104° F.), rapid respiration and pulse rate and all the stigmata of acute measles. She was much more severely ill on this occasion than on the former one. The bronchitis and photophobia were more severe, the rash thicker and darker and laryngitis so severe that the patient lost her voice for several days. She made an uninterrupted recovery.

The features of the case that seem to me to make it worthy of record are:

1. Both attacks were perfectly typical.

2. There was apparently complete recovery after the first.

3. The second attack was more severe than the first and occurred within three months.

The child is perfectly healthy and robust and is brought under perfect conditions so far as home care and hygiene are concerned.

Reviews.

SURGICAL APHORISMS.

A LITTLE book by C. Hamilton Whiteford, "Surgical 'Don'ts' (and 'Do's')," contains much wisdom, common

sense and right thinking. The author evidently is a man of sound judgement and experience. He has indeed given quite a brightly written little handbook of surgical aphorisms and professional moral precepts. All young and most old surgeons might profitably spend an hour in reading and invariably digesting them and let us add in comparing their own practice with the counsels contained in this unpretentious booklet. Some no doubt may not quite see eye to eye in the advice given in various matters, but taking the work as a whole it is excellent, practical and full of common sense and of a high standard of surgical ethics. We commend it especially to all aspirants to the Fellowship of the College of Surgeons of Australasia.

Analytical Department.

"METATONE."

In January, 1925, we published a general report on the result of an inspection of the factory of the well known firm of Parke, Davis and Company, at Rosebery, near Sydney. Attention was called in the report to the arrangements instituted for the control of the accuracy of compounding. The laboratory at Rosebery is in charge of a competent chemist who accepts nothing for granted and keeps a check on each stage of manufacture of every product. Moreover, a checked sample of each batch of every product is stored for reference, so that should any question arise as to the stability of the mixture or the accuracy of the preparation, further analyses can be carried out at any time. We referred to the system whereby variations in composition of the several preparations can be reduced to a minimum. It is unnecessary to refer at the present time specifically to the general arrangements.

Our inspector has studied the preparation of a tonic preparation known as "Metatone." The claim is made on behalf of this preparation that in virtue of its vitamin content combined with strychnine and manganese, it is found to be valuable in practice whenever a tonic effect is desired. Although it is impossible to define with scientific accuracy the term tonic, the clinical observation of the beneficial result of the exhibition of certain mineral and other substances when a person is weak from previous illness or when his resistance is lowered, must be recognized as a definite therapeutic action. The combination of vitamin B with nucleic acid, strychnine and the salts of sodium, potassium, calcium and magnesium and with phosphorus compounds will be accepted as a most valuable one.

The preparation is made in the cold. The ingredients in the form of a standardized solution of vitamin B, nucleic acid also in solution, glycerophosphates of sodium, potassium, calcium and magnesium are added one after another in two vats. During the course of the mixing a precipitate forms. There is reason to assume that there is no loss of vitamin and that the sediment is derived solely from the flavouring and colouring matter acted on by the nucleate of sodium. Unfortunately it has been impossible to estimate the vitamin content of the finished product. Certificates are available to the effect that the full effect is obtainable from the mixture. The final mixture is passed through a filter press and emerges as a clear, deep red liquid. It is collected in a large closed container from which it is passed into bottles with the minimum exposure to air. The clarity of the liquid appears to be permanent. The flavouring agents lend to

appears to be permanent. The havouring agency rend to it a very pleasant taste and aroma.

All the ingredients are of the best quality. The strychnine content is given as nine milligrammes per hundred cubic centimetres (0.04 grain to the ounce) and the greatest care is exercised to insure that this proportion is maintained. As a result of our investigation we are justified in stating that "Metatone" is a reliable, ingenious and palatable tonic preparation. It will probably find favour in Australia among medical practitioners.

1 "Surgical 'Don'ts' (and 'Do's')," by C. Hamilton Whiteford, M.R.C.S., L.R.C.P.; second Enlarged Edition; 1928. London: Harrison and Sons, Limited. Crown 8vo., pp. 68. Price: 4s. net.

The Dedical Journal of Australia

SATURDAY, JANUARY 5, 1929.

A Retrospect.

The first word to our readers in the year 1929 must be an explanatory one. During the last weeks of 1928 no message, information or annotation has been published in these columns concerning the serious illness of His Majesty the King. The daily press has contained the bulletins composed and signed by Lord Dawson of Penn and Sir Stanley Hewett, together with other medical practitioners called in to assist them in their responsible task. These bulletins have been framed with great care. For a considerable time it was evident that words were chosen in order that the facts concerning the course of the King's illness might be presented in such a manner that the public would remain unaware of the actual danger to life of the Royal patient and yet, should the probable issue eventuate, no one could state that facts had been withheld. This journal had no special means of ascertaining the facts. Comment on the cables received through the ordinary channels would have been speculative, as it would have been based on implied as well as expressed information. It now appears that the King contracted a severe pneumonia, caused by a streptococcus, which was complicated at an early date by a fibrinous inflammation of the pleura. The pleural exudate, at first scanty and tenacious, later became more plentiful. As soon as pus was withdrawn by exploratory puncture, a rib was resected and the empyema was drained in a dependent position. organism gained a firm hold on the patient and was recovered from the blood. It was thus evident that the prognosis was extremely bad. The fever was not high; there was a profound septicæmia arising from a local infection in the lung and pleura; the heart became embarrassed both as a

result of the heavy load imposed on the right side by the pulmonary obstruction and as the inevitable effect of the streptococcal poisoning of the myocardium. Despite the severity and extent of the infection and the apparent feebleness of the patient's resistance as indicated by the low fever, the defensive powers have gradually overcome the streptococcal attack and as this issue is going to press, there seems to be every indication that His Majesty will be restored to health. The medical profession in Australia, in common with the citizens of the British Empire, expresses its deep gratitude at the favourable news of the last week or ten days and a devout wish that His Majesty may be spared to enjoy the loyal adherence of his subjects for a long time.

The Medical Profession in Australia.

The growth of the medical profession in the Commonwealth of Australia has continued during the year 1928 at an average rate. The scope of activity of the profession is becoming extended year by year. New tasks have to be performed and more elaborate means are being introduced into daily There is much work to be done that has scarcely been touched. The cry that the medical profession in Australia is overcrowded, is not justified by fact. There is always room for men and women with natural ability, the inquiring kind of mind, the willingness to work hard for the benefit of others and a broad vision to enable them to combat disease and make the world a healthier and better place. The profession is too full to welcome those whose one objective is to earn a large income.

The British Medical Association.

Nearly every member of the medical profession in Australia recognizes the importance and value of membership of the British Medical Association and in consequence there are few eligible practitioners outside the Association. This great organization has attained a standing that is recognized throughout the Empire, as a result of the care with which its constitution has been framed and of the excellence of the machinery employed to carry out its objects. The Branches in Australia are in a strong position in view of the right granted to them by the Council to become corporate bodies

without loss of any privileges attaching to Branches of the British Medical Association. The Representative Meeting at Cardiff in July, 1928, was a successful one and much of the work completed has indirect effects on the status of the medical profession in Australia. While the Branches in Australia can claim almost complete autonomy, it must not be forgotten that the Representative Body, the Council and the several committees conduct the business for the benefit of the Association as a whole. The contributions made by the overseas Branches to the British Medical Association for central administration and for common privileges are relatively small. A motion to the effect that a medical association should be formed in Australia with complete autonomy, affiliated with the British Medical Association and similar in constitution to the Medical Association of South Africa (British Medical Association) was defeated in the Federal Committee in April, 1928. The views expressed by Sir George Syme, as chairman of the Federal Committee, will find an echo throughout the whole of the Commonwealth. He wished to strengthen the bond between the medical profession in the various parts of the Empire and maintained that the British Medical Association constituted the bond of union. The proposal to form a federal council in Australia has advanced a stage by its adoption by the Federal Committee. The establishment of such a council may take some time, but when the council is in existence, it should enhance the value of the Branches in Australia without depriving members of the rights and privileges that are accorded by the British Medical Association.

The New South Wales Branch has commenced the erection of its new premises in Macquarie Street. A prize was offered early in the year for the best plans and designs for the new premises and Professor Leslie Wilkinson was appointed assessor. The prize was gained by Mr. Kenneth McConnel and Mr. J. C. Fowell. The designs were exhibited for a time. The winners are now acting as the architects for the building. The other respects the year 1928 has not witnessed any special development of the Branch. The papers read at the scientific meetings of the Branch have included some of considerable

importance. There has been a tendency to accept some contributions that are not of a high standard.

The Victorian Branch has exhibited much activity in regard to the meetings at which scientific papers have been read. No less than fifteen general meetings and seven clinical meetings have been held and twelve meetings of sections formed for the purpose of promoting the special branches of medical knowledge. Previously there was a section known as the Lodge Medical Officers' Section. The name is now changed to the General Practitioners' Section. It is a little difficult to understand the exact function of this section. The sections of the Branches fulfil a useful purpose when matters connected with the special branches of medical knowledge are concerned. The sections, however, are not component parts of the Branches from the point of view of the constitution of the British Medical Association. The resolutions of a section could not be binding on a Branch. It is possible that the views of the section that deals with medico-political matters, might be used by the Council of the Branch as a guide when the formation of a policy is under consideration.

The Queensland Branch has acquired a valuable site for a new building on Wickham Terrace. For the present it is not proposed to erect a new build-The Branch has now become incorporated under the Companies Act as a company not for profit. Under its Memorandum and Articles of Association it is competent for the Branch to hold property. Steps are being taken for the Branch to acquire shares in the Queensland Medical Land Investment Company, Limited. The scientific activity of the Branch has been developed during the year and some valuable papers have been read at the meetings. The Bancroft Memorial Medal has been established and one has been presented during the year to each of the Joseph Bancroft Memorial lecturers.

No further steps have been taken in regard to the erection of the new home of the South Australian Branch in North Terrace. The scientific work of this Branch has not been neglected and some important papers have been read at the meetings. An attempt is being made to stimulate the members of the Western Australian Branch to raise the standard of the scientific contributions and the readers of papers are giving evidence of greater care in the preparation of papers.

The Tasmanian Branch has been more active during the year 1928 than during the immediately preceding years. Much work still has to be done before this Branch can hope to attain a high level of general scientific excellence, but there is no reason why the present office bearers should not achieve a great deal in the immediate future.

The Universities.

The year 1928 will be remembered as one of great significance in the history of the universities in Australia. The munificent gift of Mr. G. H. Bosch for the purpose of establishing on a sound foundation full-time chairs of medicine, surgery and bacteriology will raise the Medical School of the University of Sydney to a level hitherto unattainable. No appointment has yet been made. There are indications that there will be many applicants and the selection of the best for the three positions will have to be carried out with care and a full consideration of the needs of the school and the qualifications of the applicants. We trust that the Medical Faculty will be able to perform this onerous task without assistance in the old country.

In a short time the new school of hygiene and tropical medicine will be completed and ready for occupation. The opening of this school should be coincident with the burial of the old scheme of training medical practitioners in sanitary science for the purpose of equipping them for the positions of administrators of the public health laws.

The appointments of Dr. H. G. Chapman as Director of Cancer Research and of Dr. F. P. Sandes as Director of Cancer Treatment have left two chairs vacant. Professor H. Priestley is occupying the position of acting Professor of Physiology. It thus appears that many important matters will be determined within a relatively short time in the Medical School of the University of Sydney and that the future for the school is full of promise. These appointments and the incidental readjust-

ments render the present time peculiarly opportune for a complete recasting of the school and the curriculum.

At the University of Melbourne also matters of importance are taking place. The promise of the trustees of the Edward Wilson (The Argus) Trust to endow a chair of obstetrics and to place 'the teaching on a firm basis has been the subject of some controversy in the columns of this journal. It will be remembered that Dr. Marshall Allan was appointed Director of Obstetrical Research in 1925 at a salary of £2,500 a year. When the term of this appointment was drawing to a close, the proposal was made that the trustees would provide the sum of £60,000 out of the trust fund to endow a chair of obstetrics, it being understood that the Victorian Government was about to give one million pounds sterling for the purpose of bringing the medical school and the teaching hospital together. There appears to have been some belief that the International Health Board of the Rockefeller Foundation would be induced to contribute a substantial sum toward the scheme of extending the medical school and erecting a new clinical hospital. Later the government intimated that there was no prospect that it would advance one million pounds against the possible sale of the site of the Melbourne Hospital and the promise, whatever it was, made by the trustees, was withdrawn. Early in December the University Council of the University of Melbourne resolved to appoint a professor of obstetrics at a salary of £2,000 per annum without the right of private practice. It has been announced that the salary and a further annual sum of £1,000 is to be provided out of grants from the State Government and from the Edward Wilson (The Argus) Trust. While this arrangement is less favourable than that originally put forward, it is nevertheless an excellent one and the trustees are to be congratulated on having reconsidered their position. The professor will be required to engage in research and to undertake the duties of his chair. extra £1,000 is to be available for the provision of additional staff or research facilities "as the professor desires." We understand that a selection committee has been created for the purpose of

recommending the appointment of a competent practitioner as professor.

Professor Woodruff has recently been appointed Director of Bacteriology and a senior lecturer in bacteriology will shortly be appointed at a salary of £600 a year.

It will be recognized that there is a tendency in Australia today for private benefactors to endow chairs in the medical schools and the example of Mr. Bosch in Sydney may be emulated in Melbourne and Adelaide at any time.

Australasian Medical Congress (British Medical Association).

The third session of the Australasian Medical Congress (British Medical Association) will be held in Sydney from September 2 to 7, 1929. An executive committee has been appointed. Sir Alexander MacCormick is the President and Dr. T. W. Lipscomb and Dr. A. A. Palmer are the Honorary Secretaries. Dr. W. H. Crago is the Honorary Treasurer. Members are being invited to make application for membership of the congress at an early date. Further announcements concerning the session will be published from time to time in the columns of this journal.

Preventive Medicine.

The most important event in the year 1928 in the realm of public health work is the removal of the headquarters of the Commonwealth Department of Health from Melbourne to Canberra. Although the transfer of the offices must have entailed much heavy work and have created great difficulty in the conduct of the department, no discernible effect of the disturbance has been noted. The department has issued three important service publications during the year. Some general comments have been made in these pages on two of them, namely, No. 36, "The History of the Intestinal Infections (and Typhus Fever) in Australia," by Dr. J. H. L. Cumpston and Dr. F. McCallum, and No. 37, "The History of Diphtheria, Scarlet Fever, Measles and Whooping Cough in Australia," by Dr. J. H. L. Cumpston. Valuable as are all the service publications of the department, we know of none that is more important or more remarkable than these two volumes. The third publication, No. 38, "The Epidemiology

of Leprosy in Australia," by Dr. Cecil Cook, is full of interest, but contains much controversial matter. It is hoped that a critical summary of its contents will be published in an early issue. It is proposed to publish in this journal a highly valuable report of the officers of the Division of Industrial Hygiene on the excretion of lead and the changes in the blood in men at Broken Hill and at Port Pirie.

Industrial hygiene seems to be making slow progress in Australia, despite the activities of the officers of the Division of Industrial Hygiene of the Commonwealth Department of Health and of the Director of Industrial Hygiene of the New South Wales Department of Public Health. Until the medical profession as a whole takes up this problem in earnest and until the Branches of the British Medical Association recognize that this chapter of preventive medicine is more important than is the endeavour to combat disease that is already manifest, it is unlikely that industrial firms will be persuaded to adopt measures for the protection of the health and safety of employees. This matter concerns the general practitioner as much as or even more than it concerns the departmental officers.

Much concern has been felt in Victoria on the introduction of a bill to amend the *Health Acts*. It was proposed to gather under the control of the health department the branches dealing with preventive medicine, with the care of the insane and with sanitary work. Grave objection has been taken to the proposal to subject the heads of these branches to the control of a permanent secretary of the department who may be non-medical.

Post-Graduate Study.

The activities of the Melbourne Committee for Post-Graduate Work have continued unabated throughout the year. The most important events in this connexion were the visit of Mr. Victor Bonney in April and of Professor Fraser in August. Post-graduate work is being developed in Sydney, Adelaide, Brisbane and elsewhere and has become an important asset of the medical profession.

Obituary.

The medical profession has lost several prominent members in the year 1928. George Horne, Robert Steer Bowker, Robert Andrew Stirling, William Alexander Teao Lind, Stanhope Hastings MacCulloch, Thomas Morgan Martin, Harry John Clayton, Robert Oliver Douglas and Alexander Wellesley Finch Noyes were among the most eminent of those whose death we have recorded during the year. The death of Dawson Williams in England has affected every member of the British Medical Association.

Hospital Policy.

DURING the course of the year the several Branches of the British Medical Association in Australia have dealt seriously with the problems of hospital administration and the relations between the honorary members of the medical staffs and the public. The Council of the Victorian Branch has received a report from a subcommittee on the whole question and will submit a hospital policy to a meeting of its members early in this year. The Council of the New South Wales Branch has urged the medical officers of the great public hospitals to form a special society for the purpose of determining the best way of furthering the interests of the hospitals and of the medical staffs. A small committee was formed over a year ago. Certain difficulties were encountered at first, owing to the restricted reference. The committee is now working on broad lines and it is anticipated that progress will be made. The Queensland Branch has dealt with certain of the problems connected with the subject and has induced the Queensland Government to admit some principles of importance to the medical profession, chiefly in regard to the right of medical officers to charge private fees when attending private patients in special wards of public hospitals.

Hitherto no definite steps have been taken by the Branches to review the whole question and to devise a new hospital policy through the Federal Committee. There is evidence that divergent views are held by individual medical prectitioners on the question of the desirability or otherwise of granting honorary medical officers of public hospitals the right to charge fees from patients who are required to pay for their maintenance in the institutions. It should be mentioned that the College of Surgeons of Australasia has debated the hospital question and

has adopted certain resolutions. The establishment of community hospitals with beds for patients who cannot afford to pay, for those who can pay reduced fees, and for those who can pay full fees, is advocated. At these hospitals it is held that any medical practitioner can attend his patients in the ward and, further, that the paying patients should have free choice of doctor. It thus appears that this matter is an urgent one of the moment and that the work that has been done in 1928, will lead to something definite in the near future.

The Australasian Medical Publishing Company, Limited.

The Australasian Medical Publishing Company. Limited, the proprietor of this journal, has expanded the sphere of its activities to a considerable extent during the year 1928. The Printing House has been in occupation for close on four years and its output has been greatly increased. During the year its first book, "Hydatid Disease," by Dr. Harold R. Dew, has been published. Every member of the British Medical Association in Australia should regard it as a duty to purchase a copy, chiefly for his or her own benefit and partly to support an organization that has been established for the medical profession and that is owned by the medical profession. It has also published a small but excellent book on the care of babies and the hygiene of mothers called "Our Babies," by Dr. G. Buzzard Dunlop. This book is offered to the public at the small price of one shilling and sixpence. Medical practitioners are recommended to obtain a copy and if they approve of it, to advise their women patients to purchase copies.

The Australasian Medical Publishing Company, Limited, undertakes the printing of scientific periodicals and educational works. It possesses the equipment for this class of printing and its staff is trained for this work. It also undertakes ordinary printing and appeals to the medical profession to order its stationery, including prescription forms, letterheads, memorandum of fee forms, case cards and the like from The Printing House. The cost of the undertaking is considerable, but if the medical profession will accord the company its support, its success is assured.

Abstracts from Current Gedical Literature.

MEDICINE.

The Reaction of the Skin to Histamine.

I. STARR (Journal of the American Medical Association, June 30, 1928) has studied the results of the intracutaneous injection of histamine as evidence of the deficiency or otherwise of the circulation in the lower limbs. Such injections promptly produce reactions having the appearance and sensations of a mosquito bite. These phenomena, as Lewis has shown, are due to capillary and arteriole dilatation and to the locally increased permeability of the vessel walls. Lewis believes that diverse types of injury cause like skin reactions by producing liberation of histamine or a similar substance in the skin and that the reactions themselves are pur-posively protective, that is, the blood and lymph production defend the tissue cells from further injury. If the circulation be blocked, no characteristic reaction follows and cooling of the skin by artificial means, with a resulting diminution in the local blood supply, prevents the production of the typical weal. All these facts suggest that absence of typical reactions might be noted if the circulation were pathologically obstructed and so give valuable evidence of diminished peripheral blood flow and blood pressure. In a normal person the characteristic reaction due to the injection of histamine appears in two and a half minutes and is complete within five. In persons evincing clinical evidence of impairment of the circulation of the extremities, the histamine reaction delayed, incomplete or totally absent. Some diabetics without such signs give delayed histamine reactions. Reactions, parallel with those found in pathological conditions of the circulation, may be produced in normal people by the mechanical obstruction of the blood flow or by exposure of the parts to cold.

Cardiac Murmurs.

JAMES ORR (The Canadian Medical Association Journal, July, 1928) discusses the assessment of cardiac murmurs. The value of cardiac murmurs is essentially diagnostic. Prognosis depends on the ability of the patient to perform his usual daily activities, as indicated by the symptoms and sensations to which their performance gives rise. A patient whose myocardium is becoming impaired, will recognize a limitation of a definite kind in his capacity for effort long before examination will reveal anything amiss. Prognosis depends entirely on the capacity of the ventricular muscle to maintain an adequate circulation. Mackenzie classified cardiac murmurs into three groups, physiological, functional and organic. Physiological murmurs occur in conditions of perfect health; pos-

tural systolic murmurs and respiratory murmurs belong to this group. Functional murmurs are not associated with any organic change in the valve; they are always systolic in time, they usually occur with a degree of dilatation of the heart and are presumably due to a relaxation of the mitral ring. Organic murmurs are associated with changes in the valve, generally of a sclerotic or degenerative kind. It is not always possible to distinguish organic from functional systolic murmurs. A rough or musical quality is more common in organic murmurs. To assess the value of a murmur it must be considered from two points of view, namely, the condition of the orifice and the condition of the myocardium. Diastolic murmurs are usually organic and indicate lesions of valves which tend to embar-rass the heart and produce heart failure. Diastolic murmurs mean either mitral stenosis or aortic regurgitation. The earliest sign of regurgitation. mitral stenosis is a short murmur immediately preceding the first sound, at first variable, but soon persistent. As stenosis advances, a short diastolic murmur is added which gradually increases in length. The stenosis being cicatricial, the presystolic murmur is never heard during the original illness (acute rheumatism), but it follows after two to five years. Mitral stenosis in young people is a grave condition; in older people it is often of less significance, especially with a history of acute rheumatism in childhood, as this indicates a slow development of stenosis. In progressive cases there are other factors present besides the valve change. Rheumatic infection affects all the tissues of the heart and usually causes some impairment of ventricular muscle. A mid-diastolic murmur, separated from both first and second sounds, indicates impairment of the conducting system, that is, some degree of heart block. It coincides with the auricular systole and its mid-diastolic time indicates that the auricular systole is separated by a pause from that of the ventricle. Aortic regurgitation is usually serious, but many sufferers lead quite strenuous lives for years. A small degree of hypertrophy of the left ventricle often indicates a good prognosis, whereas great hypertrophy is of bad prognostic import. A high systolic and low diastolic blood pressure, 190 to 60 millimetres of mercury, is whereas a moderate or slight difference, 180 to 90 millimetres or less, may be consistent with an efficient heart. Systolic aortic murmurs are generally physiological or functional; if aortic stenosis exists, the response to effort will be limited and the left ventricle enlarged. Aortic stenosis by itself is an exceedingly rare condition. Mitral incompetence is the rarest of all valvular affections; functional incompetence may be more frequent, due to relaxation of the mitral ring. Systolic murmurs at the mitral orifice are of little importance provided the heart muscle shows no sign of inefficiency, such as breathless-

ness or pain or limitation of effort. In such a case the importance of the condition depends on these symptoms and not on the murmur. Systolic murmurs arising during an acute illness are generally functional and due to dilatation. Often judgement must be suspended until recovery from the acute illness, when dilatation or hypertrophy will be manifest if the murmur means organic disease. persistently rapid pulse with a lack of improvement in the general condition often indicates that the murmur is significant of endocarditis, especially in rheumatic fever. In this condition endocarditis tengs to occur in the first two weeks, but the murmur may not appear for some time.

Sequelæ of Epidemic Encephalitis.

L. H. ZIEGLER (Journal of the American Medical Association, July 21, 1928) has been able to "follow up" 752 patients who had suffered from epidemic encephalitis over a space of five and a half years. The careful tracing of these patients seems to show that neither occupation, age nor sex has any bearing on the severity of the disease, nor can other factors be discovered of any prognostic import. The disease, in America at any rate, manifests its greatest incidence during the winter months. The mortality rate for the group investi-gated was 13.2% and the recovery rate 1.3% at a date five and a half years after the original infection. Of the entire group only 15.7% are able to perform regular full-time work. From the severe acute attacks a patient may recover, but from dis-orders of behaviour and from the Parkinsonian syndrome rarely if ever is there a return to a normal mental and nervous state. Some patients appear to think that they improve under the influence of scopolamine. Sodium cacodylate is of some use for its general tonic properties. measures of treatment include the supervision of the general hygiene, the removal of any foci of infection and the institution of vaccine therapy from the cultures of organisms from

The Treatment of Septic Infections.

R. FLECKSEDER (Wiener Medizinische Wochenschrift, September 15, 1928) considers that the various drugs used in the treatment of sepsis fall into two main groups-those which stimulate the reticulo-endothelial system also cause leucocytosis, example, the heavy metals, aniline dyes, protein substances, and the group which acts directly on the bacterial invaders, for example, iodine, cresol and quinine. The results of such treatment in sixty septic infections have been summarized. Colloidal silver was used in fourteen cases of septic endocarditis with three failures. "Choleval" (colloidal silver in combination with sodium cholate) in doses of 0·1 to 0·3 gramme intraven-ously was tried in five patients with suppurative cholangitis with success in one only. Gold preparations

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resulted in varying success with ten patients. Cures followed its use for post-abortional sepsis, septic arthritis and staphylococcal septicæmia, although as many failures were also recorded. Gold preparations produced more general reaction and local effects on the kidneys than the other colloidal preparations. Methylene blue, especially in the combination "Argochrome," proved successful in many septic infections, particularly those of the biliary passages. However, none of the aniline dye preparations was of much value in the treatment of generalized infection. "Septoiod," an iodine preparation, gave very good results in cases of severe rheumatic polyarthritis associated with endocarditis and pericarditis. "Yatren" was tried without success in three cases of streptococcal pyæmia. A preparation, "Isotol," composed of several isomers of carbolic acid, was found to be valuable in septicæmia. Quinine in the form of "Optochin" was useful especially in pneumococcal infections. "Neosalvarsan" had no effect on the cases for which it was used. In summarizing his results the author expresses a preference for colloidal silver, "Isotol" and the organic iodine preparations in that order.

Preventive Vaccination Against Tuberculosis.

In summarizing the results of seven years' administration of the Bacille Calmette-Guérin vaccine, G. Poix (La Presse Médicale, July 11, 1928) upholds its efficacy and harmlessness. No case has yet been reported in which an infant has died as the result of the vaccination. Those that have died, have been premature or syphilitic and the vaccine could not be held to blame. A few born of tuberculous parents succumbed, but they may well have been infected in utero, it being now recognized that the tuberculous ultravirus can pass through the placenta. Statistical, clinical and experimental evidence clearly demonstrates, he maintains, that the method is innocuous. To the argument that the von Pirquet reaction is not always obtained, Poix quotes Calmette's experiments on animals, wherein he showed that tuberculin sensitivity and immunity are quite independent The occasional failures phenomena. to protect infants he explains as a recognized biological peculiarity in all vaccination. As Bacille Calmette-Guérin does not in any way lower resistance or exert an unfavourable influence on the organism, no infant should be deprived of the benefit of its immunizing action. In nearly 4,000 infants up to one year of age, contacts of tuberculous sufferers vaccinated with Bacille Calmette-Guérin, the mortality from tuberculosis has been 0.9%, whereas that of nonvaccinated infants in the same category is in Paris 25%. Poix concludes by applauding the statement of the Minister of Hygiene in France that Bacille Calmette-Guérin vaccine should

be given to all doctors and midwives for their unrestricted use.

E. LEURET AND J. CAUSSIMON (Journal de Médecine de Bordeaux, July 25, 1928) in a review of all the experimental work that has been carried out by Calmette, his collaborators and others on the Bacille Calmette-Guérin vaccine, criticize the conclusions reached by Calmette, that his vaccine is both entirely innocuous and absolutely efficacious. They allow that a new strain of tubercle bacilli has been evolved of extremely low virulence, but experimental evidence so far, they assert, makes it by no means certain that these bacilli are incapable of giving rise in ultra-susceptible subjects to tuberculosis. Further patient research on these lines is necessary. Also it is too soon, they aver, to state positively that the vaccination is absolutely preventive against tuberculosis. In the first place, a small number of vaccinated infants has died of the disease; in the second they point out that Calmette himself admits that it is not immunity which is conferred by vaccination, but only a greatly increased resistance to tuberculosis and finally they contend that not until the present vaccinated infants have passed safely through the critical stage of puberty to adult life can final proof of the value of Bacille Calmette-Guerin be forthcoming. Meanwhile they doubt the wisdom of vaccinating infants who are not exposed to infection, though strongly, recommending it in those whose environment would render contagion inevitable.

Treatment of Cardio-vascular Disease in Acute Infections.

P. SCHOTTMÜLLER (Deutsche Medi-Wochenschrift, September 14, 1928) deals with cardiac failure and vasomotor disturbances during acute infections, especially pneumonia. He considers that strophanthin 0.5 to 0.8 gramme is of the greatest value. While some observers state that it should not be given if digitalis has been exhibited during the previous four or five days, he has not seen any ill effects following its use. For the associated vasomotor disturbances adrenalin is the best drug to use. He prefers to give it intravenously by the continuous drop method. Normal saline solution or Ringer's solution is used, one cubic centimetre of adrenalin to one hundred cubic centimetres of saline solution. A cannula is fixed in the vein and the solution allowed to run in at the rate of 0.5 cubic centimetre of adrenalin and fifty cubic centimetres of saline solution per hour. This may be kept up for one to three days. As adrenalin is liable to become decomposed by the action of light, the container should be made of brown or blue glass and should not hold more than two hundred cubic centimetres. In this way the maximum effect of the drug will be obtained. Not only is the blood pressure raised, but the pulse is improved in rate and quality and

cyanosis disappears. An added advantage is that, if necessary, strophanthin or glucose can be added at any time. Overdosage of adrenalin is noted by the occurrence of palpitations, a feeling of faintness and sometimes a rigor. If the injections be continued for more than twenty-four hours, there is a likelihood of thrombosis of the vein, but he has never seen embolism follow on this.

Yellow Fever and Dengue.

G. PITTALUGA (Medicina de los Paises Calidos, January, 1928) discusses the problem of yellow fever. The awakening of the latent endemic foci of the disease in West Africa gave rise in 1926 to 1927 to a series of epidemic outbreaks in which a great number of Europeans lost their lives. This stirred up the interest of the nations who have colonies in that region. This epidemiology acquires greater interest and importance coming at a time when there is a crisis in the knowledge of the complaint. The supposed discovery by Noguchi in 1918 of the virus of yellow fever is now considered to be disproved, the leptospira of Noguchi now being considered identical with the Leptospira icteroides of Weil's disease. The fact of the transmission of the virus of yellow fever by Stegomyia fasciata seems to be regarded as an undisputed fact. This insect is scattered in suitable locations between the forty-second parallels north and south and wherever the insect exists, there is a potential site for an epidemic of yellow fever. It has been noted that in tropical America Weil's disease has not been differentiated from yellow fever until the prophylactic cam-paigns against Stegomyia caused yellow fever to disappear. This is clear proof against the identity of the two diseases, but clinically the differential diagnosis is very difficult where the two diseases are endemic. Dengue is in a different category. From the practical point of view yellow fever is not considered during an epidemic of dengue. But dengue, like yellow fever, is a disease caused by an as yet unknown virus, transmitted by the Stegomyia and probably also by other mosquitoes. A disease caused by a spirochæte similar to the Weil-Mathieu germ, occurring among the anthropoid apes in French Guiana has been reported. It clinically resembles yellow fever and is transmissible to man. In the autumn of 1927 there was a pandemic outbreak of an exanthematous disease with points of resemblance to dengue and yellow fever. The author quotes Cleland, of Adelaide, and other writers in support of the view that dengue may be a mild and modified form of yellow fever. Those engaged by various governments in the campaign against yellow fever make no mention in late bulletins of vaccines and serum in prophylactic treatment, but lay great stress on the destruction of the Stegomyia, the isolation and protection of patients and suspects and the defence of the houses by wire screens.

British Dedical Association Mews.

SCIENTIFIC.

A MEETING OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION WAS held at the Medical Society Hall, East Melbourne, on November 14, 1928, Dr. J. NEWMAN MORRIS, the President, in the chair.

Classification of Disease and the Cause of Death.

In the absence of Sir George Knibbs through illness, his paper on the international classification of disease and causes of death and its revision was read by Mr. C. H. Wickers, the Commonwealth Statistician (see page 2).

Dr. J. Newman Morris, the President, in opening the discussion, referred to the kindness with which Sir George Knibbs had dealt with the shortcomings of the medical profession in certification and emphasized the importance of the subject from the point of view of preventive medicine.

Dr. Walter Summons said that the paper had been prepared originally for presentation at a meeting of the Eastern Subdivision of the Victorian Branch of the British Medical Association. It had been felt, however, that the subject was too important for such a limited audience, with the result that the present meeting had been called. Dr. Summons said that he had had some experiences of the compilation of statistics in his investigation of the incidence of miner's phthisis in Bendigo in 1910. It was difficult to obtain an estimate of the prevalence of occupational disease from any available statistics, as the cause of morbidity was often not the cause of death and death certificates were unreliable in this regard. He thought that the Federal Government should publish a copy of the American list for the benefit of medical practitioners. Dr. Summons expressed doubt as to whether the relative incidence of puerperal sepsis in Australian maternal mortality figures was as high as it appeared and suggested that its unenviable prominence could be explained by more lax certification in other countries. He commended the idea of a dual certificate and thought that a lecture on the method of filling in death certificates should be included in the curriculum of medical students.

SIR JAMES BARRETT said that no classification could be final and no system could approach perfection. In the American list pellagra was given as a cause of death, whereas pellagra was not actually a cause of death, but lowered the resistance to other diseases. Syphilis was once accorded tenth place as a cause of death. Osler by investigation into general paralysis, tabes and similar diseases, raised syphilis to fourth place, while some later authorities were inclined to place syphilis first. Sir James Barrett regarded double certification as essential to the accurate recording of deaths from venereal disease.

Dr. R. Marshall Allan expressed great interest in the paper. In his own work he had been recently closely associated with statisticians. It was desirable to give statisticians in the Commonwealth power to refer death certificates back to practitioners, as was done in England and America. A guide as to method should be printed in the death certificate book or the American publication should be issued to all practitioners. There was need for the profession to give more details of the causes of puerperal deaths. It was difficult to obtain an accurate estimate of the mortality rates associated with operative maternity measures. He was doubtful of the accuracy of Australian records of the incidence of puerperal sepsis. The compiler of statistical returns soon learned the limitations of the certificates of many medical men and Dr. Allan considered that double certification would be valuable in obtaining reliable records. He took the opportunity of expressing his thanks to the heads of the Commonwealth and Victorian Statistical Departments for the help they had given him in his recent investigations.

Dr. F. NYULASY asked if the form of death certificate given on page 10 were suggested for use in Australia. If so, it would be difficult to answer the question: "What test confirmed diagnosis?"

Dr. John Dale expressed thanks to the author and the reader of the paper. He thought that the subject was most important and hoped that Sir George Kribbs's recommendation would come to fruition. In Birmingham, where the speaker had worked, death certificates passed through the office of the Medical Officer of Health early. In Melbourne he had been obtaining full information of the causes of death under five years which could not have been obtained without special inquiry. Dr. Dale approved of the idea of double certification and considered that its adoption would stimulate interest in the idea of prevention. He thought that the suggestion in the writer's last paragraph was a valuable one and should be put into practice. He asked the reason for the writer's statement that the English system was not a good one.

Dr. F. L. Davies said that the idea of double certification was helpful, though fraught with obvious difficulties. Even more helpful, though possibly not so practicable, would be a rule that autopsy should be performed on every person who died. In any clinic where records were kept, it was very common for post mortem examination to prove that clinical and even operative diagnosis had been wyong.

Dr. H. D. Stephens asked if Mr. Wickens had any knowledge of the results of the Swiss system of dual certification. Dr. Stephens pointed out that under such a system insurance companies could and would demand to see the real certificate, which might lead to the failure of the system. In following the medical history of a child from birth to adolescence it was sometimes possible to detect before the age of two a lesion which ultimately led to death even later than fourteen.

Dr. A. V. M. Anderson joined in appreciation of the paper and said that in insurance work his experience of death certificates had given him the impression that certification was accurate on the whole. In comparing the lists in the American publications of 1909 and 1920 respectively it was interesting to see that pneumonia had not been transferred to the list of general diseases. It was interesting to see that "senlilty" and "sudden death" were included as causes of death. The wording of the certificate form in use in Victoria suggested the necessity of stating a primary and a secondary cause of death which was one of the causes of difficulty for the statisticians. Death in child-birth was commonly given as a cause of death of a relative by proponents for insurance and might often be misleading. Dr. Anderson supported the proposal to issue a pocket hand book of instructions for signing death certificates and thought that the matter should be considered by a medical committee and by the next medical congress.

Dr. Ketth Ross pointed out that methods of classifying diseases varied with the object of the classification. There was an inherent difficulty in compiling statistics. Chronic nephritis, arterio-sclerosis and cerebral hæmorrhage might all occur in one patient, but would be included by the statistician under three separate headings. A rigid classification should be adopted defining the primary cause of death in such cases. In the present instance it would be arterio-sclerosis. A comparable difficulty would arise in the case of a patient who died while suffering from typhoid fever and advanced carcinoma of the tongue. In deaths by violence, also, hospital records would tend to be at variance with statistical lists. Hospital records should be kept in such a way that they would show in what industry and in what manner the accident occurred. Dr. Ross thought that the idea of compulsory post mortem examination in all cases was impracticable.

Dr. W. A. Kemp who had recently returned from England, said that the duplicate slip was in use there and the death certificate book contained a classification of causes of death and a helpful list of terms which were inadvisable.

Mr. A. M. Lawton, the Victorian Registrar-General and State Statistician, expressed his appreciation of the paper and discussion. He was of opinion that all still-births should be registered both as births and deaths. Referring to the last paragraph in the paper Mr. Lawton said that the Registrar-General did not receive the returns until

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sometimes after the deaths had occurred, which would make it difficult for him to issue warning notices as to the prevalence of any particular disease in time to be of use.

Mr. W. W. Lang, Classifying Officer in the Victorian Statist's Department, said that undesirable or misleading terms were used in about 8% of death certificates in Victoria. The actual figures for England and Wales in 1911 were 9.67% and in 1926 6.21%. In Victoria the figures in 1911 were 9.7% and in 1927 8%. Thus the improvement had been greater in England and Wales than in Victoria.

DR. J. NEWMAN MORRIS said that the Council of the Victorian Branch of the British Medical Association had recently appointed a subcommittee to inquire into the matter of death certificates. The subcommittee had met and made certain inquiries, but had not proceeded further in the matter in view of the projected conference of statisticians. Dr. Morris pointed out that certification including the signing of death certificates, was one of the most important and responsible duties of medical men. He personally had found the American list very helpful and he recommended its general use. There were no instructions or information in the death certificate book issued in Victoria and he considered it a matter of national importance to give the medical profession the opportunity of correct certification. A study of Cabot's case records showed that clinical and even operative diagnoses were often at fault, as proved by post mortem examination. Dr. Morris conveyed the thanks and appreciation of the Branch to Sir George Knibbs and Mr. Wickens.

In reply Mr. Wickens did not support the suggestion that the Commonwealth Government should publish the American lists, as the latter could be purchased for seventy-five cents and would serve the purpose, unless they were considered by an Australian committee to be not in keeping with Australian conditions. Speaking of the mortality from puer-peral septicæmia, Mr. Wickens suggested that the Aus-tralian and New Zealand authorities had included a greater percentage of cases under this heading than was done in some other countries. As reliable statistics as possible had been obtained in New Zealand and this had placed the New Zealand figures in a position of undesirable and probably unmerited prominence. He considered that instruction in statistical matters was very desirable for medical men. Referring to statistical inquiry into the relationship of occupation and death, Mr. Wickens said that any method of investigation on a large scale involved the preparation of cumbersome and complicated tables which made routine records almost impracticable. It was better to have a periodical intensive study of particular items of interest or importance. He agreed that the adoption of double certification was fraught with difficulties. Until a year previously Switzerland was the only country using the system, but it was now in use in Holland. At the recent conference of health and statistical authorities it had been decided that the adoption of the English system would be a step in the right direction, especially the inclusion of detailed directions in the death certificate book.

Certain terms were included in the American lists because they were in general use and not necessarily because they were desirable. Registration and recording of deaths et cetera were all done at the State offices, the Commonwealth Department confining itself to the compilation of statistical records. Mr. Wickens was of the opinion that still-births should be registered by compulsion. In Western Australia they had been registered for some years both as births and deaths. He considered that posts mortem examination of every case would be very expensive and that it would be most difficult to obtain public approval for such a course.

Regarding the suggested dissemination of information about epidemics et cetera, Mr. Wickens said that it was desirable that knowledge should be available to check an evil before deaths occurred. That is to say, morbidity figures were required as well as mortality figures, particularly in relation to occupation. The inclusion on a death certificate of the duration of the illness was

important, but it was often a very difficult guess for the doctor and there had been no attempt to tabulate it statistically.

A MEETING OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the B.M.A. Building, 30-34, Elizabeth Street, Sydney, on November 8, 1928, Dr. J. E. V. Barling, the President, in the chair.

A Coryza.

Dr. F. Guy Griffiths read a paper entitled: "The Treatment of a Coryza" (see page 12).

Dr. J. S. PURDY, D.S.O., said that he did not feel competent to criticize the paper, but he eulogized Dr. Griffiths for his masterly account of the treatment of coryza. He was concerned with prevention. It was his experience that people who lived practically in the open air, did not suffer from catarrh. Catarrh had nothing to do with cold, but unfortunately catarrh was associated with cold in the public mind. Dr. Purdy had met Nansen while he was in Aberdeen on his return from the far north. Nansen had told him that no man on the Fram had suffered from catarrh during the voyage, but that within a week of their return to civilization the whole crew had suffered from coryza. Explorers in the Antarctic had reported a similar experience. Frank Wild and Shackelton had not suffered from coryza until they unpacked some old clothing and within a day or two several members of the party had become affected. Dr. Purdy referred to an article which had appeared in the American Journal of Public Health in which an author claimed that colds in the majority of instances were contracted by people whose digestion was upset. It was thought that this depended on the alkalinity of the blood and it was suggested that the administration of small doses of bicarbonate of soda would be effective in aborting an attack. He had noticed that people who surfed regularly, seldom suffered from influenza. He had made inquiries from those who frequented Bondi beach regularly, and had been unable to hear of one habitué who had become affected during the pandemic in 1919. He said that he had been so impressed with this that he had gone down to the sea each week and had got a bottle of sea water which he had used as a nasal prophylactic—a hypertonic super-saturated sea salt solution. He thought that catarrh in some instances was due to the use of electric radiators, for they had the effect of drying the nasal mucosa and respiratory membranes, thus making people more susceptible to catarrh. Whitla, writing in The Practitioner, had associated catarrh with the dust from libraries. He had tried all the vaunted remedies, but had found none nad tried all the vaunted remedies, but had found none of them to be effective. Recovery in his case took place just as frequently when he took nothing. He claimed that common colds were the most frequent cause of absence from work. Research in their prevention would be a paying proposition in curtailing the time lost to the community apart from their other objectionable features.

In the course of his remarks Dr. RALPH WORRALL referred to the contamination of the sea wate at Bondi and to the risk of infection of the nasal and pharyngeal mucosa from this source.

DR. H. C. McDouall said that he wished to put in a word for those who ascribed coryza to cold or chill. While the actual cause was infection, he was of opinion that the bodily resistance had been lowered by exposure to chill or to draughts. This had the effect of lowering the vitality, stimulating quiescent germs and producing a fresh cold.

Dr. Leighton Kesteven thought that if people allowed their bowels to become constipated, a cold might more easily be contracted, especially during the early months of winter. He maintained that the best method of avoiding colds was to look after the regularity of the bowels.

Dr. A. J. Gibson stated that he had frequently had colds lasting for a couple of months. He had tried inhalations, hot drinks, Dover's powders, among other remedies, without benefit. When he moved out of the city he had fewer colds. Two or three drops of "Chloretone Inhalant," repeated after two or three hours, usually had a beneficial

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effect. He referred to Dr. Scot Skirving's delightful definition of the causation of cold, "the concentrated essence of fresh air in the form of draught." He thought that the reason why surf bathers rarely suffered from catarrh was that they were in good physical condition. Those who indulged in surf shooting, however, were often attacked by a coryaa. On one occasion he had been seized with a severe catarrh at the cricket ground and on his return home he had saturated a handkerchief with eau de Cologne which he had inhaled. This inhalation had given him prolonged relief. Later he was suddenly seized with catarrh while in a patient's house and had asked for some eau de Cologne. The result of the second inhalation was also satisfactory.

Dr. P. Fiaschi, O.B.E., said that it was a pity that more papers of this kind were not read. He agreed with what Dr. Purdy had said about radiators. In America with steam heating coryza was not more prevalent than in Australia. While at Columbia University, he had frequently been in a lecture theatre with three or four hundred students and but few of them had suffered from ordinary cold. Steam heating could be regulated. The windows could be left open and a current of air allowed to pass through the room. The temperature of the room might be either five or twenty degrees above zero, but as long as the ventilation was good, no harm resulted. A closed room with a higher temperature was dangerous. He hoped that Dr. Purdy would do something to check the new habit of the city commissioners of spreading gravel and grit in the streets; they had been made to resemble a model poultry farm. He thought that if this continued there would be a much bigger crop of coryza.

Dr. Guy Griffiths in reply agreed with Dr. Purdy in regard to what he had said in connexion with the experience of the explorers in the Arctica and Antarctica. members of Scott's expedition had rarely been able to put on dry clothes for two years, they had been constantly exposed to damp and cold; notwithstanding this, they had been free from catarrh. Reference had been made to bicarbonate of soda. This was a remedy which Lauder Brunton had recommended for the relief of pain and for infection. He thought that Dr. Worrall's contention was Sewage pollution sometimes occurred at quite correct. In fresh water baths infection of the upper respiratory passages was very common. Dr. Griffiths agreed that nasal douching was an excellent preventive measure. It should not be used during an acute attack. had recommended very many remedies. He agreed with all that had been said concerning prevention, but pointed out that he had not dealt with prevention in his paper. Dust was undoubtedly dangerous in that it might carry infection, while silica dust was capable of injuring the mucosa. Coryza was not a disease due to a single germ, there were at least twelve to fifteen varieties concerned in its ætiology. He concluded his remarks with the slogan: "If you see a draught go and sit in it."

Obstetrical Practice.

Dr. H. LEIGHTON KESTEVEN read a paper entitled: "Prophylactic Obstetrical Practice" (see page 14).

Dr. A. J. Gibson said that he had listened with great interest to Dr. Kesteven's paper. He could not see eye to eye with him. He had certainly been successful in his results, but he was sure that if the methods recommended were practised by others, they would not give good results. Dr. Kesteven had been lucky in that he had sole control of his patients. He had been able to prevent any examina-tion other than his own and in this way he had avoided sepsis. He congratulated Dr. Kesteven on his ability to recognize abnormalities early in labour. If abnormal conditions were recognized early and rectified, better results would be obtained. He deprecated the use of forceps before dilatation was complete. This practice was liable to produce tears of the cervix and of the vaginal vault. Often very extensive tears took place without being recognized. If the vaginal vault were examined two or three months later, very extensive scarring would be found. He thought that it was eminently desirable to undertake examination of the vaginal vault in all cases after the use of forceps. He thought that country patients formed a better developed type than the city or suburban

patients. They were not so prone to complications. Some years previously he had acted as a locum tenens for a practitioner at Cobar. His principal had been in the habit of delivering with forceps as soon as he could. The nurse had objected to this practice because she had noticed that every patient had been torn and that convalescence was much more difficult.

In regard to Dr. Kesteven's remarks concerning masterly inactivity he had stated that the profession would not adopt it. The fact that they had not adopted it was the cause of the high maternal mortality. On the other hand he stated that masterly inactivity should be used with judgement. Bad results would be obtained if forceps were not applied at the right time. Dr. Kesteven had compared his mortality of 0.5% among women with occipito-posterior presentations with Dr. Gibson's mortality of 11%. He would point out, however, that his (Dr. Gibson's) patients were hospital patients. Five or six of the births were premature; in two or three there was placenta pravia; one of the infants had spina bifida and craniotomy had to be performed once. In all the occipito-Had the patients been posterior position was fixed. seen earlier and the malpresentation corrected, the high mortality might have been avoided. There were some points in Dr. Kesteven's paper which he regarded as very valuable. He approved of his meticulous care in the preparation and sterilization of instruments. He also thought that Dr. Kesteven's caution in regard to the sterilization of his hands and in the preparation of the patient was excellent. He objected very strongly to manual dilatation. If Dr. Kesteven's teaching were adopted, the result would be a greatly increased maternal mortality. The teaching of manual dilatation and application of forceps before the cervix was completely dilated was very dangerous. It was quite safe to apply forceps if the head were on a fully dilated cervix.

Dr. E. Sydney Morris said that he was concerned with obstetrics as applied from the standpoint of preventive He agreed with what Dr. Gibson had said. Dr. Kesteven's experience was certainly unique. Wherever he (the speaker) went in the State he found that no one was prepared to own up to a death in his midwifery practice. The strange thing was that there were about four hundred deaths in childbed in New South Wales every year. A medical practitioner might attend his first thousand cases without a death. He was sure that if Dr. Kesteven's advice was followed there would be a terrible increase in the maternal mortality. It was a shock to him to be told that practitioners should apply forceps before the cervix was fully dilated. Dr. Morris suggested that the relationship between manual interference and puerperal septicæmia or other complications should be investigated. He was sure that this relationship was very close indeed. He referred to a woman who had died a short time before from puerperal septicæmia. The death had taken place thirty-six hours after delivery and the practitioner in attendance, a very competent man, had made but one examination. It was difficult to explain. It was phenomenal that Dr. Kesteven could do the outrageous things he claimed he had done, and obtain such excellent results. In regard to masterly inactivity he pointed out that in England midwives were not allowed to do anything, but were required to stand by. There were records of thousands of deliveries without a single death. In New South Wales far too many patients had to be admitted to hospital after unsuccessful attempts had been made outside. He admitted that Dr. Kesteven took great pains to insure strict asepsis. He hoped, however, that his teaching would not become epidemic throughout the

Dr. H. A. Ridler characterized Dr. Kesteven's figures as remarkable. He said that as a teacher he certainly could not advocate the adoption of his methods. Manual or instrumental dilatation of the cervix was a most dangerous operation and he always taught that the result was trauma. Dr. Kesteven had stated that sepsis was always introduced from without, but he disagreed with this. Sepsis might originate in the vagina. The organisms in the vagina became stirred up because the tissues had been changed. The trauma was similar to a ploughing up of the soil. Women who had never been touched at times

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got septicæmia. This, however, was rare. Usually sepsis was due to trauma. He would like the opportunity to show Dr. Kesteven the patients with septicæmia whom they treated in hospitals. Many of these patients had been torn. He referred in particular to one who had been admitted with extensive tears involving the broad ligament who had died from septicæmia. He was satisfied that if manual dilatation were employed, there would be a great increase in maternal mortality. To reduce maternal mortality it was necessary to eliminate trauma as far as was possible. Obstetrics was held in disesteem and he did not think that there would be any decrease in maternal mortality until the dignity of obstetrics as a specialty was recognized. In conclusion Dr. Ridler referred to the action of the University of Melbourne and of the Edward Wilson (The Argus) Trust. He thoroughly approved of the appointment of a professor who would devote the whole of his time to research and teaching and who would be paid a reasonable salary.

Dr. Morris asked Dr. Kesteven to state the length of time after the birth during which he had controlled the condition of the infants. In other words he wished to know whether his record of infantile mortality was confined to the first week. He also wished to know whether any of his patients had received antenatal care during pregnancy or whether they had been seen for the first time during labour.

DR. J. E. V. BARLING thanked Dr. Kesteven for having come from such a distance to address the meeting. Dr. Kesteven practised in a district by himself and his nearest neighbour was twenty-two miles away. Dr. Barling congratulated him on his results. His own opinion was that early examination was necessary for the purpose of detecting abnormalities and of rectifying them. He had always held that the cervix should be fully dilated before a forceps might be applied. Prolapse of the uterus was very likely to occur if this was not done.

Dr. H. Leighton Kesteven, replying, said that he had anticipated criticism and was pleased that it had been so outspoken. With Dr. Ridler he held that obstetrics should be placed on a plane as high as that of surgery. would come about only when the obstetrician regarded his every case as calling for the closest supervision on his part and requiring his active assistance at the earliest At present obstetrics was the dead arm of He quoted "Directions for Obstetrical Nurses" from Williams's "Obstetrics," p. 312: "If pains begin between 8 a.m. and 11 p.m. notify me as soon as possible so that I may . . . make my plans accordingly." Dr. Kesteven added that it should be noted that this was not that the patient might be seen as soon as possible, but that the obstetrician might make his plans accordingly, cancel his theatre party or arrange a substitute for the evening bridge party. Quite in accord with this inter-pretation the directions continued: "But if labour begins between 11 p.m. and 8 a.m., do not notify me until the pains are strong and frequent, or unless you think it necessary for me to see the patient at once." These instructions were typical of the attitude of the profession generally and commonly resulted in the attendant arriving too late to rectify any errors that might be present.

The statistics of forceps cases had not yet been published, those so called were the statistics of complicated cases treated with forceps. Those which he had given earlier in the evening, were, he believed, the first real series of forceps cases that had yet been made public. With regard to manual dilatation he did not advocate that it be carried out in every woman, nor did he do so himself. labour were protracted and the cervix soft, he did not hesitate and regarded it as quite safe. When he was called to see his patient, he went with the intention of doing something and he went as early as possible. As a result he was able to say that not a single baby had been born during the previous five years within a radius of nineteen miles of his home at whose birth he had not been present, and the engagements were made early so that he was able to give an average of six months' antenatal care. Though he regarded this early ante-natal care as most important, no amount of such would prevent malpresentations and other abnormalities at the onset of labour. Practically all of these could be countered, as had

been done by him in the early stages of labour. He asked the rank of the profession to consider his teachings sympathetically and more carefully to watch for themselves. When forceps were applied before the cervix was fully dilated, that must be watched with the utmost care. The os could be felt on either side with the finger tip and quiet traction must be made until the cervix slipped gently over the head. Quite often the forceps should be applied to retard progress rather than to pull. He thanked the members for the way in which they had received his paper.

Correspondence.

THE LATE PETER HANNAH CUNNINGHAM.

SIR: I have just read the obituary notice of Peter Hannah Cunningham, published in your columns on October 27 of this year. He was one of the very finest men I have ever known. Your article referred to his classical training and enthusiasms and his rich store of general knowledge. These were not mere hobbies with him. On the contrary they coloured, even if they did not serve as the actual basis of, his whole outlook. They appeared to me to form an essential part of his professional equipment. I have been privileged to know many medical men whose character and attainment command my profound admiration, but not one has exhibited to the same degree as the late Dr. Cunningham the conviction of the intimate association of all other human activities with the art of healing. He knew the past so well that he always appeared to be a step in advance of his contemporaries. He saw his profession in the light afforded by the great luminaries in all fields of human endeavour and in all eras of recorded In the judgement of one who knows nothing whatever about medicine, he was a wonderful man and the world is the poorer for his passing.

Yours, etc.,

A. D. ELLIS.

Selbourne Chambers, Chancery Lane, Melbourne, November 6, 1928.

ENDOMETRIOMA.

Sir: I was very interested in Dr. Isbister's paper on endometrioma in the Journal of the seventeenth instant. There is no dispute about his first case. I cannot, however, support Professor Windeyer's objection to calling the tumour in the second case an endometrioma. The tissue was endometrial to start with, and because it was decidual, objection is raised to its being an endometrioma. Surely the stage of pregnancy at which the tissue was examined, is highly significant—it is, precisely, about the fifth month that the endometrium ceases to be glandular and assumes the character we typically associate with the word "decidual." We are left with two alternatives: (i) either this was a rapid venous extension of decidua from the cavity at the time of the catastrophe or (ii) an old endometrioma followed the usual course of endometrial tissue in normal position during pregnancy. This second alternative postulates hormone control of the cycle rather than pressure of the growing fætus and the second alternative could be valid only on such an assumption.

On the whole question Sampson's latest work (American Journal of Pathology, 1927, volume III, page 93) seems to indicate venous spread as the preponderant factor in endometrial metastasis.

Yours, etc.,

J. V. DUHIG.

Wickham Terrace, Brisbane, November 22, 1928.

Dbituary.

WILLIAM THORNBOROUGH HAYWARD.

WE regret to announce the death of Dr. William Thornborough Hayward which occurred at Adelaide on December 21, 1928.

ROY HENRY ROLLINSON WHITAKER.

We regret to announce the death of Dr. Roy Henry Rollinson Whitaker which occurred at Mount Mulligan, Queensland, on December 28, 1928.

Corrigendum.

OUR attention has been drawn by Dr. J. B. Dawson to n error in his paper, "Avicenna: The Prince of an error in his paper, "Avicenna: The Prince of Physicians," which was published in the issue of December 15, 1928. Line 17 in the second column on page 751 is incorrect. The two sentences affected should be as follows: When he was eighteen, having mastered the learning of his time, he sought a market for his accomplishments. He was fortunate enough successfully to pilot the Emir through a dangerous illness, being thereupon made the official physician to that potentate.

Books Received.

AIDS TO PSYCHIATRY, by W. S. Dawson, M.A., M.D. (Oxon.), M.R.C.P. (Lond.), D.P.M.; 1928. London; Ballilère, Tindali and Cox. Crown 8vo., pp. 319. Price: 48. 6d. net.

THE PRESSURE PULSES IN THE CARDIOVASCULAR SYSTEM, by Carl J. Wiggers, M.D.; 1926. London: Longmans, Green & Co., Ltd. Demy 8vo., pp. 212.

Diary for the Month.

JANUARY 15.—New South Wales Branch, B.M.A.: Ethics Committee.

JANUARY 17.—New South Wales Branch, B.M.A.: Meeting of the Section for the Study of Cancer.

JANUARY 22.—New South Wales Branch, B.M.A.: Organization and Science Committee.

JANUARY 22.—New South Wales Branch, B.M.A.: Executive and Finance Committee.

JANUARY 29.—New South Wales Branch, B.M.A.: Medical Politics Committee.

Wedical Appointments.

Dr. James Ernest Shilliday (B.M.A.) has been appointed Public Vaccinator at Box Hill, Victoria.

Dr. Charles Eric Watson (B.M.A.) has been appointed Public Vaccinator at Hughesdale, Victoria.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xvi.

ALFRED HOSPITAL, MELBOURNE: Surgeon to In-Patients, Surgeon to Out-Patients.

CHILDREN'S HOSPITAL, CARLTON, VICTORIA: Resident Medical Officers (8).

MARYBOROUGH HOSPITALS BOARD: Resident Medical Officer. THE UNIVERSITY OF ADELAIDE: Junior Research Fellowship.

Medical Appointments: Important Motice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

| BRANCH. | APPOINTMENTS. |
|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| New South Wales: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney. | Australian Natives' Association. Ashfield and District Friendly Societies Dispensary. Balmain United Friendly Societies Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phænix Mutual Provident Society. |
| Victorian : Honorary Secretary, Medical Society Hall, East Melbourne. | All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria. |
| QUEENSLAND: Hon- orary Secretary, B.M.A. Bullding, Adelaide Street, Brisbane. | Members accepting appointments as medical officers of country hospitals in Queensland are advised to submit a copy of their agreement to the Council before signing. Brisbane United Friendly Society Institute. Stannary Hills Hospital. |
| South Australian: Secretary, 207, North Terrace, Adelaide. | All Contract Practice Appointments in South Australia. Booleroo Centre Medical Club. |
| WESTERN AUSTRALIAN: Honorary Secretary, 65, Saint George's Terrace, Perth. | All Contract Practice Appointments in Western Australia. |
| NEW ZEALAND (WELLINGTON DIVI- SION): Honorary Secretary, Welling- ton. | Friendly Society Lodges, Wellington, New Zealand. |

Medical practitioners are requested not to apply for appointments to position at the Hobart General Hospital, Tasmania, without first having communicated with the Editor of THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales.

Editorial Motices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be

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